

**SEVENTH GRADERS' PERCEPTIONS OF COLLEGE AND CAREER ASPIRATION
SUPPORTS IN TWO URBAN CHARTER MIDDLE SCHOOLS**

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College and career aspirations are important to the development of students' short and long term educational and personal goals. Although students rely on information they receive and are influenced by experiences in which they engage in a variety of settings, for many, school is an important source of college and career information. How students interpret and process this information can affect the development and sustainability of their aspirations, making student perceptions important to the study of college and career aspirations. Seventh grade in particular is a critical time in the development of college and career aspirations as students are beginning to think about their future plans and also make important decisions about the level of effort and engagement that may affect future affordances. Using Social Cognitive Career Theory (Lent, Brown & Hackett, 1994) as a lens, this study employed a mixed methods approach, which included interviews with teachers, school leaders and guidance counselors and student survey data, to better understand seventh grade students' perceptions of the presence and utility of the college and career supports in two urban charter middle schools. Seventh graders from two urban middle schools completed the Middle School College and Career Aspirations Survey, an online survey that investigated four college and career supports prominent in the research literature. They are: college talk; teacher feedback/advocacy; guidance counselor feedback/advocacy, and college preparation activities. Eighty-five of a possible ninety-three

seventh grade students completed the survey. Thirty-five of the participants were male and fifty were female. Overall results of this exploratory study indicate that seventh grade students with varying degrees of self-reported academic performance perceive the presence and utility of college and career supports at similar levels. Results also indicate the need for college and career supports as early as seventh grade. The findings are consistent with the research literature, which stresses the importance of the frequency and quality of the guidance counselor supports and interactions in the overall development of students' aspirations. Future research might include ways to better understand how the supports might productively be instantiated in schools to increase the likelihood that students develop aspirations and that they ultimately pursue those aspirations.

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PREFACE

The idea for this study started many years ago when I was an admissions and financial aid counselor working with urban high school students. I often wondered why some students were engaged in the college admissions process while others were not. As a recent college graduate, I was unaware of the obstacles that many of the student with whom I worked faced on their educational journeys. So I listened. I watched. I helped. I learned. I grew. I realized that to be in the “college pipeline” you had to aspire to college much earlier in your educational career than high school. These experiences and observations were the underpinnings of this dissertation on urban seventh graders’ perceptions of college and career aspiration supports.

My experiences in higher education as both a professional and a student have had a profound impact on my life. I have been fortunate on my own educational journey to have been surrounded and supported by many amazing individuals. I am thankful for every experience, kind word, “gentle” push and extended hand that helped me become who I am today.

Some say completing a dissertation is a very lonely process. Although I tend to agree the process can be, at times, very isolating, I would not have been able to complete it without my “network”. Many thanks to:

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1.0 INTRODUCTION

Over the past several decades, national efforts have been directed toward increasing the number of students who graduate from high school. These efforts are anchored in the longstanding American belief and in the empirical evidence that high school graduates are more likely to have access to greater employment and educational opportunities and to be more productive citizens. Although earning a high school diploma is an important educational milestone, it is for many American students only one step of a longer educational journey. Postsecondary education is often believed to be the pathway to develop the skills and tools necessary for long-term financial stability (Kuh, Kinzie, Buckley, Bridges, & Hayek, 2006; McCabe & Barnett, 2000; Mumper, 2003; Museus, Harper, & Nichols, 2010).

Studies have shown that on average, college graduates earn more annually and have greater long-term earning potential than high school graduates (Elliott, Kim, Jung, & Zhan, 2010; Museus et al., 2010). Educational attainment has also been linked to decreased unemployment, lower incarceration rates, increased civic engagement and higher quality of life (Baum & Payea, 2004; Cooper, 2006; Kezar, Chambers, & Burkhardt, 2005; Mumper, 2003; Museus et al., 2010; Pascarella & Terenzini, 2005; Swail, Cabrera, & Lee, 2004).

Despite the many societal and individual benefits of postsecondary education, for some, access to higher education is limited. Many students from disadvantaged, low-income and minority backgrounds must overcome and negotiate great obstacles to enroll in college (Cooper,

2006; Freeman, 1997; McDonough, 1997; Nichols & Harper, 2008). Once there, they often struggle to complete college degrees (Kuh, Cruce, Shoup, Kinzie, & Gonyea, 2008). As a result of these obstacles, students who are disadvantaged are not only less likely than their advantaged counterparts to graduate from high school but are much less likely to enroll in college. This is evident in data collected by the United States Department of Education (Aud & Hannes, 2011). DOE found in 2009 that only 55 percent of high school completers from low-income families enrolled in college immediately following high school. This is 29 percentage points lower than their counterparts from high-income families where 84 percent of students enrolled immediately in college (Aud & Hannes, 2011). Why then, despite the growing concern for an educated workforce and a push by policymakers and school leaders for college and career readiness programs, do fewer students who are economically disadvantaged enroll in college?

Extensive research exists documenting the processes by which students decide to participate in postsecondary education and the factors that influence the college decision making process (Anderson & Hearn, 1992; Brown & Lent, 2005; Hossler, Braxton, & Coopersmith, 1989; Hossler & Gallagher, 1987; Perna, 2000). Researchers have demonstrated that family background, school environment and academic achievement, alone and in concert, influence students' college aspirations and their likelihood of engaging in the college search and application process (Freeman, Brown II, & Varady, 2005; Hossler, Schmit, & Vesper, 1999; Kao & Tienda, 1998; McDonough & Calderone, 2006; Muhammad, 2008; Pitre, 2006; Smith, 2009; St. John, Paulsen, & Carter, 2005; Tierney & Venegas, 2006). Researchers have also documented the impact of student aspirations on academic success, engagement, and goal setting as evidence that aspirations matter as an interim factor influencing the likelihood of enrolling in college (Ali, McWhirter, & Chronister, 2005; Appleton, Christenson, Kim, & Reschly, 2006;

Eccles & Midgley, 1989; Floyd, 1996; Murdock, Anderman, & Hodge, 2000; Plucker, 1998; Trusty, 2000; Wentzel, 1997). Thus the development and sustained support for college and career aspirations in k-12 schooling is important for any meaningful effort to increase overall college going, perhaps particularly for students who are traditionally considered underserved.

Although research has focused on the identification and impact of person-specific characteristics on student educational aspirations and achievement (Adelman & Gonzalez, 2006; Hossler et al., 1999), the school environment plays a critical role in the development and formation of educational aspirations. For this reason, it is important to investigate the influences that the organizational structures and networks in schools have on students' educational aspirations (Holland & Farmer-Hinton, 2009) and the school-based supports (i.e., teacher feedback/advocacy, college talk, college and career planning activities and counselor feedback/advocacy) that support them.

The school context may be particularly important for students from minority, urban, and disadvantaged backgrounds who have been traditionally underrepresented in higher education because these students tend to have limited access to family and personal resources with college and career knowledge. Students who are considered underserved are more likely to rely on the resources available at school as their primary source of support and information and are less likely to have college educated parents or access to educated adults who can provide educational guidance and college support than their more advantaged counterparts (Adelman & Gonzalez, 2006; Holland & Farmer-Hinton, 2009; McDonough, 1997; Venezia & Kirst, 2005). Without these supports, students who are considered underserved tend to rely upon their school-based networks for postsecondary educational planning and guidance. This can be problematic given that many students who are considered underserved attend urban schools that lack the resources

and organized supports necessary to promote and support college going behaviors (Holland & Farmer-Hinton, 2009; Roscigno, Tomaskovic-Devey, & Crowley, 2006; Venezia & Kirst, 2005).

For example, in more affluent schools, the decision to enroll in a college preparatory curriculum is relatively passive (Tierney & Venegas, 2006). The cultures in these schools reinforce the expectation that the majority of students will go on to attend some form of postsecondary education. In contrast, in low-income urban schools, the decision to enroll in a college preparatory curriculum and aspire to college is often an active process (Venezia, Kirst, & Antonio, 2003). While some students who are considered underserved in urban schools make college-preparation decisions (i.e., course selection, good grades, preparation for college entrance exams) without the aid of accurate information or guidance, other students remain passive and do not actively engage in decisions regarding their educational future (Tierney & Venegas, 2006). Moreover, students who are considered low-income may be in a school environment in which it is assumed that students do not go on to college except in special circumstances. Thus it is particularly important to understand the ways in which students who are considered underserved receive information about college, how they interpret those messages, and the impact and influence of this information on the students' college and career aspirations.

1.1 PURPOSE OF THE STUDY

College and career aspirations are important to the development of students' short and long term educational and personal goals. Students receive information from, and are influenced by experiences in, a variety of setting. However, for many students, the primary source of college

and career information is school. As a result, the in-school “supports” (e.g., information, experiences and perceptions) and the ways in which students’ process, adapt, and utilize these supports are critical to the development of college and career aspirations (Holland & Farmer-Hinton, 2009).

This study investigates seventh grade students’ perceptions of the presence and utility of college and career aspiration supports in two urban charter middle schools. Students process college and career information in their environments and make personal attributions and decisions from that information. Student perceptions of their environments also shape and influence their aspirations for the future and their beliefs that those aspirations are attainable and valuable. Thus, presence and utility are congruent and important factors from a social cognitive perspective on this problem. This study focuses on four supports most noted in the college and career aspiration literature: 1) college talk, 2) teacher feedback/advocacy, 3) college preparation activities, and 4) counselor feedback/advocacy. The study includes: a survey of seventh grade students at one point in time, interviews of teachers and school administrators, and an analysis of public and school documents. These documents include, but are not limited to, web site information, college and career curriculum materials, and state report card submissions. I used data from interviews and documents to contextualize the survey questions and the interpretation of the survey results. Thus I was able to investigate school-based college and career supports via a student-centered lens.

1.2 DELIMITATIONS

This study investigates how four in-school supports (college talk, teacher feedback/advocacy, college preparation activities, and counselor feedback/advocacy) influence the college and career aspirations of urban seventh grade students. I acknowledge that out-of-school factors (e.g., socio-economic background, race, and gender) influence the college and career aspirational development of students. However, this study investigates only the potentially malleable in-school supports that schools may have the ability to adapt and control.

This study references and investigates the college and career aspirations of students who are considered underserved. There are many interpretations of what it means to be “underserved”. It is unlikely that a single definition would encompass the complex nature of the individual characteristics of people within a group. However, it is likely that a widely accepted definition of students who are considered underserved, and the one that is used for the purpose of this study, includes those who are financially disadvantaged and may have limited access to educational opportunities and education (Bragg, Kim, & Rubin, 2005; DeJesus, 2000). Students who are considered underserved often share one or more of the following characteristics: they may be from low income families; have limited access to high performing and/or well resourced schools; have limited familiarity with college and career planning; have limited access to educationally successful adults and/or role models; or be a member of a group that is not well represented in higher education. Although some researchers have defined students who are considered underserved as those students who are members of particular ethnic and/or racial groups, for the purposes of this study, students who are considered underserved are defined more broadly. It is important to note that “members of ethnic and racial minority groups are not by

definition underserved” (Moiduddin & Moore, 2008); however, they are often disproportionately represented in groups of students who are considered to be underserved.

1.3 STATEMENT OF THE PROBLEM

Much of the work on college and career aspirations has focused on high school students, their experiences, and the influence of those experiences on their future plans (Gallant & Zhao, 2011; Hossler & Gallagher, 1987; Roderick, Nagaoka, Coca, Moeller, & others, 2008; Wettersten et al., 2005). However, recent research suggests that the development of aspirations (future college and career plans in particular) occurs as early as middle school (Gibbons & Borders, 2010; Jackson et al., 2011; Lent, Hackett, & Brown, 1999). During middle school, adolescents begin to develop ideas about their futures. Thus, providing opportunities for college and career exploration is particularly important. Delaying this exploration until high school may be too late. Students in high school may have made decisions about their futures (e.g., course selection) without the knowledge of how those decisions can impact their futures. Furthermore, once students form a belief that they cannot go to college, this belief becomes the lens through which they view later events and experiences. Understanding how middle school students make meaning of their environments is important to the study of college and career aspirations. Thus, this study investigates seventh grade students’ perceptions of the presence and utility of college and career aspiration supports.

Students’ ideas and beliefs regarding their plans for the future and, in turn, their college and career aspirations, are shaped by experiences and influences that operate in a variety of contexts within students’ lives. Although it can be challenging to draw some bright line between

school and non-school influences on aspirations, for the purpose of this study, I plan to try to do so. Schools need to know they are doing all that is possible, particularly for students who are considered underserved, to effectively support positive life trajectories, which include college and career aspirations (Adelman & Gonzalez, 2006; Holland & Farmer-Hinton, 2009; McDonough, Yamasaki, & Korn, 1997; Venezia & Kirst, 2005). In no way does this work imply that a student's college and career aspirations are wholly formed within schools, but what is tractable from a school perspective is what occurs in school. Therefore this study focuses on the potentially malleable school-based supports (teacher feedback/advocacy, college talk, counselor feedback/advocacy and college preparation activities) as a means to support aspirations. I acknowledge that these school-based efforts interact with out-of-school influences. These influences are not the focus of this study; however, the survey design seeks to capture some of ways in which out-of-school factors mediate college and career aspirations.

2.0 REVIEW OF THE LITERATURE

In this chapter, I review the college and career aspiration literature and then describe the theoretical framework to inform this study. The review of the literature focuses on the important theoretical framings that researchers have used to think about and study the development of aspirations broadly and reviews empirical studies of aspirations, particularly studies that focus on the school contexts. In looking at the empirical studies, I focus in some detail not only on their findings but also the methodological approaches most common in this domain. I also highlight ways that the current approaches have not adequately addressed the role of student perceptions in aspiration development within school settings.

2.1 WHAT ARE COLLEGE AND CAREER ASPIRATIONS?

College and career aspirations have been conceptualized and researched in a myriad of ways. The constructs that people have studied, the measures, the methodologies and, not surprisingly, the conclusions vary widely. In this section, I summarize the ways people have researched college and career aspirations, focusing particularly on the constructs that researchers have used, the measures that have been developed in the field, the samples that have been involved in the research, and the variables of interest. Outcomes are also briefly summarized.

2.1.1 Definitions of College and Career Aspirations

Although varied, most definitions of educational aspirations, including college and career aspirations, reference life goals that students set for themselves (Plucker, 1998). Motivation and drive, key components of aspirations, can be shaped and influenced by the expectations of important influencers like parents, peers and teachers (Sewell, Haller, & Portes, 1969; Sewell & Shah, 1967, 1968), students' own assessments of whether continuing school is possible, and their expectations of the benefits of education (Alexander & Cook, 1979; Jencks, Crouse, & Mueser, 1983).

Perhaps the most widely used definition of educational aspirations in the literature has been advanced by Kao and Tienda (1998) who argue that aspirations are “based on the respondents' own plans for the future, which result from various inputs, including both concrete and abstract attitudes about education” (p. 356). As adolescents gather more tangible academic experiences, their educational aspirations change.

2.1.2 College and Career Aspirations Operationalized as Future Plans

Multiple studies have operationalized college and career aspirations as plans for the future (Ali & McWhirter, 2006; Hanson, 1994; Howard, Budge, et al., 2010; Kao & Tienda, 1998; Perna, 2000; Pitre, 2006; Rothon, Arephin, Klineberg, Cattell, & Stansfeld, 2010; Trusty, 2000); however, factors identified as potentially influencing and shaping those future plans are diverse. To better understand the development, formation, and sustainability of college and career aspirations, studies have included factors related to 1) academic achievement (Rothon, Arephin, Klineberg, Cattell, & Stansfeld, 2010); 2) socioeconomic background (Hanson, 1994; Kao &

Tienda, 1998); 3) parental support (Cheng & Starks, 2002; Garg, Kauppi, Lewko, & Urajnik, 2002; Hill et al., 2004; Howard, Budge, et al., 2010; Keller & Whiston, 2008; Smith, 2009; Smith & Fleming, 2006); 4) access to college counseling and career planning (Farmer-Hinton & Adams, 2006; Muhammad, 2008; Perna et al., 2008; Plank & Jordan, 2001; Rowan-Kenyon, Perna, & Swan, 2011), and 5) the school context, culture and school belonging (Goodenow & Grady, 1993; Holland, 2011; Holland & Farmer-Hinton, 2009; Pitre, 2006). Because aspirations are dynamic and subject to both person and environmental influences, many studies examine the effects that multiple factors have on college and career aspirations (Ali & McWhirter, 2006; Mau & Bikos, 2000; Perna, 2000; Trusty, 2000).

2.1.3 Variables that Influence Aspirations as Future Plans

Academic Achievement

Academic achievement has been shown to affect the college and career aspirations of adolescents. Researchers have shown that higher levels of academic achievement are related to higher levels of aspirations (Rothon et al., 2010; Toldson, Braithwaite, & Rentie, 2009). Rothon et al., in a quantitative longitudinal study of a cohort of 2,499 East London adolescents (11-14 year olds), examined the variation of aspirations to remain in school after age 16 and academic achievement. They found a strong association between educational aspirations and actual academic achievement at age 16. In another quantitative national study of 1,225 African American males, Toldson et al. (2009) also found academic achievement to have a strong association with college aspirations. However, when compared by race, black male students who did not indicate future plans after graduation reported higher levels of academic achievement

than their white counterparts, suggesting that black students may not be receiving necessary college and career guidance.

Socio-economic Background

The effects of socio-economic status and achievement on aspirations have also been studied (Hanson, 1994; Kao & Tienda, 1998; Trusty, 2000). Hanson (1994) used a nationally representative longitudinal survey, High School and Beyond, conducted by the National Center for Educational Statistics (NCES, 1986) to explore the concept of lost talent (when student expectations fall short of aspirations) in late high school and post-high school years of adolescents. This study looked at students who had aspirations for a college degree and had some early talent as evidenced by standardized mathematics and reading scores. This study found that the loss of talent through mismatched aspirations and expectations was considerable and that social class was the most predictive factor.

In another study using the National Education Longitudinal Study of 1988 (NELS:88), Trusty (2000) examined the longitudinal effects of demographic/environmental factors, early achievement, parental expectations, students' personal resources, and parents' and students' high school behaviors on the stability of adolescents' postsecondary educational expectations from Grade 8 to two years after high school. This study included students who had early expectations for at least a bachelor's degree and had reading or math test scores below the median. Using eighth grade math and reading scores as predictor variables, Trusty also found that for adolescents with high expectations and low achievement, the stability of their aspirations was affected by socio-economic background, race, early math achievement, mother's expectations, and parental attendance at high school extracurricular activities.

Kao and Tienda (1998) employed a mixed methods approach, using the NELS:88 survey data and focus groups with Chicago high school students to investigate the effects of socio-economic status on aspirations. Their research found that family socio-economic status not only contributed to the development of educational aspirations in eighth grade, but also was important to the sustainability of those beliefs through high school.

Parental Expectations

The relative power of parental expectations and support on college and career aspirations is well documented in the literature (Bandura, Barbaranelli, Caprara, & Pastorelli, 2001; Cheng & Starks, 2002; Garg, Kauppi, Lewko, & Urajnik, 2002; Hill et al., 2004; Keller & Whiston, 2008; Smith, 2009; Smith & Fleming, 2006; Spera, Wentzel, & Matto, 2009). One hypothesis advanced in the literature is that parents who have high educational aspirations for their children project their value of education through their behaviors and actions, which in turn are internalized by their children who reflect and adjust their behaviors and beliefs about their futures (Bandura et al., 2001). In general, students benefit from parental support in their educational activities; however, for students of low income homes and minority backgrounds who are successful in preparing and gaining admission to four year colleges, this support can be a critical component of college enrollment (Hossler et al., 1999; Smith, 2009).

Qualitative studies have explored the role of parental aspirations and support of African American students through ethnographic parental interviews (Smith, 2009; Smith & Fleming, 2006). These interviews have documented not only the challenges many parents face supporting their children's college and career aspirations in a domain (higher education) in which they have

limited experience or expertise, but also acknowledged the positive impact of maternal parental support on African American women (Smith, 2009; Smith & Fleming, 2006).

Quantitative studies on the impact of parental aspirations and support of college and career aspirations also included factors related to ethnicity, achievement, school behavior and climate, and parental occupation and educational background. In a longitudinal quantitative study of 463 adolescents from 7th through 11th grade, Hill et al. (2004) found that parental involvement in 7th grade was positively correlated with 11th grade aspirations. In addition, they found that more educated parents had greater parental academic involvement and that parental involvement was related to fewer behavioral problems, higher achievement, and higher aspirations. In a Canadian study of 4,034 students from ages 8-13, Garg et al. (2002) examined survey responses to questions related to parental support and educational expectations, demographic information, students' perception of school climate, and school related work. This study provided empirical support for positive family and school-based parental involvement in fostering positive academic self-schema and educational aspirations.

In another quantitative study, Cheng and Starks (2002) analyzed the first follow-up of the NELS:88 survey data. They found that the effects of parents' and significant others' aspirations on students' educational expectations differed by race, and that close relatives' aspirations have greater influence on the educational expectations of African Americans and Hispanic Americans than on other ethnic groups. Additionally, in a quantitative study of a diverse group of 13,577 middle and high school parents, Spera et al., (2009) found that parents of all ethnic groups had high aspirations for their children; parental aspirations, children's academic performance, and aspirations are positively related. In addition, they found that parental perceptions of school climate was not strongly related to parental aspirations. However, parents with lower levels of

education had significantly lower levels of educational aspirations for their children. These studies underscore the strong role parental aspirations can play in the aspirational development of their children.

College and Career Information and Counseling

The role of school counselors in support of the development and sustainability of college and career aspirations has been well researched. School counselors have been shown to help create a school's college-going culture, shape students' and parents' perceptions of college options, influence students' aspirations for college and facilitate their understanding of college preparation activities and requirements as well as influence parental aspirations for students' college and career aspirations (Farmer-Hinton & Adams, 2006; McDonough, 1997, 2005; McDonough et al., 1997; Muhammad, 2008; Perna et al., 2008; Plank & Jordan, 2001; Rowan-Kenyon et al., 2011). Thus school counselors play a vital role in college and career planning. Students, especially those who rely on the school for future planning information, benefit from access to college and career counselors.

Qualitative studies have examined the impact of access to college counseling and career related information on the future college and career plans of adolescents mostly through interviews and focus groups of students, parents, and counseling staff. Perna et al. (2008) conducted interviews and focus groups with 595 participants consisting of teachers, counselors, and parents across five states and found that resource constraints affect the quantity and quality of college counseling access and college related information. In their study, students who attended schools with low college enrollment (i.e., students who had the greatest need for college and career services) were less likely to receive this assistance. They posit that the lack of

exposure and opportunity for support in the college and career planning process may have contributed to low numbers of college enrollments. They argued that students often need multiple opportunities and exposure to college and career planning activities to positively influence their aspirations (Perna et al., 2008).

Using the same data set, Rowan-Kenyon et al. (2011) further examined the ways in which the school context influenced the development of occupational aspirations. Results of analyses indicated that students' career aspirations and understanding of the education required to achieve those aspirations was related to the school's resource level and the career programming offered. In another qualitative study on the school context, Farmer-Hinton and Adams (2006) interviewed five high school counselors and found that social and informal means, as well as informal and personal conversations about the possibility of college as an option positively influenced the college and career aspirations of African American students.

Quantitative studies further underscore the role of school counselors. Plank and Jordan (2001) and Muhammad (2008) analyzed NELS:88 data to examine the role that school counselors played in the college and career aspiration development of students who are considered underserved. Muhammad analyzed the fourth follow-up NELS survey data and found that for African American students, perceptions of their high school counselors' expectations for their future positively influenced their college aspirations. Plank and Jordan (2001) used the entire set of NELS survey data and found that consistent and frequent college and career information from school counselors and others positively influences the college and career aspirations of low income adolescents.

In sum, the importance of comprehensive and accessible college counseling services to the aspiration development of all students, particularly those who are traditionally underserved,

has been well documented. For many students, school-based college and career planning supports are often the primary source of information about the college enrollment process. Studies that aim to better understand how school-related supports influence and aid in the development of the college and career aspirations might investigate the role of college services.

School Climate

The school context is an important environment in adolescent development of college and career aspirations. School climate, which is the “quality and character of school life and is based on a student’s sense of school belonging and perceptions of the quality of that environment” (“National School Climate Center : School Climate,” n.d.), has been shown to impact aspiration development. In a quantitative study of the survey responses of 241 ninth graders gathered by the Maryland Bridge Project, Pitre (2006) explored students’ aspirations to attend college and their perceptions of how well high school was preparing them for college. He found that early in high school, African American students aspired to attend college at rates similar to their white peers regardless of their level of academic success. He also found that those students who held negative beliefs about their high school preparation were less likely to aspire to college. Goodenow and Grady (1993) surveyed 301 urban junior high school students and found that a student’s sense of belonging in school was associated with several motivation-related measures (e.g., expectancy of success and valuing schoolwork) which have been shown to increase college and career aspiration development. Holland and Farmer-Hinton (2009) used survey data from 9,723 high school seniors collected by the Consortium on Chicago Public School Research’s Chicago Postsecondary Transition Project as well as student demographic and school enrollment data and found that school size and access to college supports (e.g., college preparation activities,

college talk, teacher and counselor feedback) influence the college and career aspirations of students.

Multiple Variables

Several studies examined how multiple variables influenced and impacted college and career aspirations. Mau and Bikos (2000) used the NELS:88 third follow-up high school survey data to examine the role of personal/psychological characteristics, school and family variables, and race and sex on the college and career aspirations of minority and female students. Ali and McWhirter (2006) interviewed 338 rural high school students and examined the relationship among a) college and career aspirations and vocational/educational self-efficacy beliefs (discussed more thoroughly in section 2.1.4), b) outcome expectations, and c) perceived educational barriers and sources of support, and found that all the factors in addition to socio-economic status are important to college and career aspiration development.

The school context, varied and complex, presents challenges to studying how students perceive and utilize school-based college and career aspirational affordances. However, as documented in the prior section, studies of college and career aspiration development that include the school context are important to understanding the role of school in aspirations, given the length of time students are in school during this developmental period and the interrelated nature of in- and out-of-school variables.

2.1.4 College and Career Aspirations and Middle School

The review of the literature indicates that adolescents make decisions regarding their future plans as early as middle school. Researchers have shown that students make career choices well before

high school and that these choices tend to remain stable as students progress through schooling (Atanda, 1999; Gibbons & Borders, 2010; Hossler et al., 1999). Despite this finding, very few studies have focused on urban middle school students and the coherence of multiple constructs across the school setting. Some studies used survey instruments and were quantitative in nature, and several large studies performed a secondary analysis of national data sets. Despite some use of qualitative methods (e.g., interviews and focus groups), very few studies used mixed methods approaches. Since aspirations are influenced by a multitude of factors, the use of surveys and interviews might allow the researcher to capture the subtle interplay between these factors and, in particular, how the school context influences college and career aspirations.

Recent research on college and career aspirations has begun to focus on middle school students (Barber & Olsen, 2004; Blackhurst & Auger, 2008; Christenson & Thurlow, 2004; Jackson et al., 2011; Lapan, 2004; Lapan, Adams, Turner, & Hinkelman, 2000; Lent et al., 1999; Way, Reddy, & Rhodes, 2007). Studies have shown that the middle school years are a critical period to study the formation and development of college and career aspirations. During middle school, adolescents begin to think more conceptually, are expected to become more self-directed learners, take greater responsibility for their coursework, and begin to compare themselves to others in their peer group (Jackson et al., 2011; Tracey, 2002). It is also during middle school that students begin to “disengage” from school (Tang, Newmeyer, & Pan, 2008).

In addition, researchers have demonstrated that middle school adolescents make important decisions about their college attendance (Atanda, 1999; Blackhurst & Auger, 2008; Gibbons & Borders, 2010; Kao & Tienda, 1998). Research has also shown that by age 13 to 14, adolescents have developed two important cognitive abilities related to career development: self-awareness and perceptions about occupations (Gottfredson, 2005; Tang et al., 2008). The

positive impact that career-related interventions can have in middle school is greater because students have not yet made critical decisions about high school courses (Jackson et al., 2011). Poor decision making during middle school and subsequent high school course tracking can preclude some students from particular college and career options. In addition to course selection, students who begin to disengage in middle school may also decide not to work hard in certain courses (e.g., mathematics and science) that can be important to academic success in high school and necessary for admission to many colleges.

2.2 COLLEGE AND CAREER ASPIRATION SUPPORTS

In adolescents' lives educational and occupational aspirations are influenced by a numerous factors in multiple contexts. The development of college and career aspirations is uniquely affected by early educational experiences. Choices, interests, hopes, goals, expectations, and actions are directly and indirectly influenced and affected by one's environment (Bandura, 1982; Bandura, Barbaranelli, Caprara, & Pastorelli, 1996; Bandura et al., 2001; Brown & Lent, 2005; Pajares, 2002). Knowing that children and adolescents spend a considerable amount of their time in school, one would be remiss to not consider the ways in which the school experience influences college and career aspirations. Certainly out-of-school experiences (e.g., living conditions, peer relationships, etc.) and person-related factors (e.g., race, socio-economic background, intelligence, etc.) have significant impact on aspirations. However, in my work I am focusing on the malleable factors or "supports" through which school-based features operate. In this section I: 1) describe the theoretical importance of the modifiable school-based supports most often investigated in college and career aspiration research, 2) review the empirical

evidence that these supports matter in adolescence, and 3) discuss the particular ways in which these supports affect the aspiration development of urban middle school students. I also highlight how many supports; though intuitive and theoretically powerful, have a limited empirical evidentiary base given the variations in the interpretation of the constructs of college and career aspirations.

2.2.1 The School Context and College and Career Aspirations

The school environment plays an important role in leveraging the support for the development and formation of educational aspirations (Holland & Farmer-Hinton, 2009; Mau & Bikos, 2000; Murdock et al., 2000; Toldson et al., 2009; Uwah, McMahon, & Furlow, 2008). The school context is particularly important for urban low-income students who have been traditionally underrepresented in higher education as they are more likely to rely on school-based resources and are less likely to have access to out-of-school information resources such as guidance from college-educated family members and peers (Adelman & Gonzalez, 2006; Holland & Farmer-Hinton, 2009; McDonough, 1997; Venezia & Kirst, 2005). This reliance on school-based college and career supports can be problematic given that many urban students attend schools with limited college and career development resources and limited infrastructure in place to support college going (Holland & Farmer-Hinton, 2009; Roscigno et al., 2006; Venezia & Kirst, 2005).

The research on the impact of modifiable school-based supports on student aspirations is varied and fragmented. Multiple definitions and interpretations of educational and career aspirations make it difficult to look across multiple studies at the supports that shape these aspirations. However, research has shown that several school-based supports have strong

predictive power in the development of college and career aspirations. The supports most investigated in the literature are: 1) parental involvement in school (Bandura et al., 2001; Hill et al., 2004; Kao & Tienda, 1998; Mau & Bikos, 2000; Toldson et al., 2009); 2) teacher feedback/advocacy (Mau & Bikos, 2000; Murdock et al., 2000; Roderick, Nagaoka, & Coca, 2009; Trusty, 2000); 3) college talk (Howard, 2003; Miron, Jones, & Young, 2009; Pitre, 2006; Plank & Jordan, 2001; Roderick et al., 2009); 4) counselor feedback/advocacy (Hossler et al., 1999; Howard, 2003; McDonough & Calderone, 2006; McDonough et al., 1997; Muhammad, 2008; Pitre, 2006; Plank & Jordan, 2001); 5) a sense of belonging (Finn, 1989; Goodenow & Grady, 1993); and 6) college preparation activities (Farmer-Hinton & Adams, 2006; Holland & Farmer-Hinton, 2009; Pitre, 2006). It has been theorized that when these supports are employed to support the college and career aspirations of adolescents, they produce more positive college enrollments.

2.2.2 Parental Involvement in School

The extent to which parental involvement in school impacts the educational aspirations of their children has been well documented by research. Parental aspirations for their children coupled with parental beliefs about their ability to aid their child's academic development has been shown to increase academic efficacy and promote higher levels of educational aspirations in children (Bandura et al., 1996; Hill et al., 2004; Kao & Tienda, 1998; Mau & Bikos, 2000; Spera et al., 2009; Toldson et al., 2009).

Positive parental involvement in school has been shown to affect the academic development and educational aspirations of their children, by signaling to teachers that parents value education and are advocates for their children in the school system (Bandura, et al., p.

1208). Teachers who had positive interactions with a parent were more likely to have greater educational expectations for the child (Bandura et al., 2001).

Parents who have high expectations for their children are more likely to make family choices that provide opportunities for their children to participate in college planning activities and communicate high educational priorities for their children (Garg et al., 2002). These priorities can include giving school work and homework attention and priority at home; monitoring school progress; communicating the importance of school by example and/or exposure; creating opportunities for their children to learn new things; and by reinforcing the importance of postsecondary education in their family lives (Bandura et al., 2001; Cheng & Starks, 2002; Keller & Whiston, 2008).

In a study of 279 students between the ages of 11-14 from a variety of socioeconomic backgrounds, Bandura, Barbaranelli, Caprara and Pastorelli (2001) found that parents with high aspirations for their children acted in ways that positively shaped their children's academic and educational aspirations. Positive parental engagement mediated the effects of socioeconomic status on educational aspirations. Kao and Tienda (1998) found similar results with parents of low-income children. High parental aspirations and positive involvement in school were linked to more academically successful children. Mau and Bikos (2000) used data from the NELS: 88 survey and found that positive parental involvement and high educational aspirations for children had a significant positive effect on the aspirations of their children. Toldson, Braithwaite and Rentie (2009) studied a large national minority sample (n=1,225) and found that parental expectations greatly influenced how children thought about college and that positive parental relationships in the school environment influenced the perceptions that teachers had of children as being "college material", having the academic ability to attend college. Keller and Whiston

(2008) also found parental aspirations and involvement to be an important influence on the college and career aspirations of middle school students. Their quantitative study of 282 middle school students' perceptions of their parents' aspirations and involvement revealed that parental interest in career related questions and plans was positively related to career aspirations.

The research on the importance of positive parental involvement on educational aspirations illuminates the need for urban schools to find ways to actively engage parents in the schooling process. This can be particularly challenging given that many parents of urban children may not have had positive schooling experiences themselves (Freeman, 1999; Holland & Farmer-Hinton, 2009). In addition, low-income parents may not feel comfortable assisting their children with their schoolwork. Through parental involvement, families build relationships that can increase the likelihood of parental involvement (Hill et al., 2004).

2.2.3 Teacher Feedback/advocacy

Much research exists on the impact of teacher feedback and advocacy on college and career aspirations (Freeman, 1999; Holland & Farmer-Hinton, 2009; Mau & Bikos, 2000; Murdock et al., 2000; Trusty, 2000). Murdock, Anderman and Hodge (2000) posit teachers communicate the value of schooling and their expectations for students' success both directly and indirectly by what they say to students and through goal setting. In addition, students who do not feel valued by their teachers or valued in the classroom setting, in turn, do not have positive feelings about school (Murdock, 1999). Trusty (2000) also found that teachers are most effective at promoting college aspirations when students feel that teachers have a personal interest/connection with them and believe that they are "college material". In their longitudinal study of approximately 400 seventh and ninth graders, Murdock et al (2000) found that students' views of their seventh

grade teachers' perceptions were better predictors of their future plans than their own assessment of their academic abilities at the time. Students viewed their teachers' appraisals as better gauges of their potential to go to college than their own self-image.

Various studies have shown that teacher encouragement is an important factor for urban students in the college preparation process (Holland & Farmer-Hinton, 2009) while others have shown that African American students perceived that the lack of encouragement by their teachers for college-going hampered their college aspirations (Freeman, 1997). Students with limited access to adults who support their educational aspirations are more likely to be sensitive to positive and negative messages from teachers than students who have access to a variety of information sources. Table 1 summarizes the studies on teacher feedback/advocacy and college and career aspirations.

Table 1: Summary of Teacher Feedback/advocacy and College and Career Aspirations Studies.

Study	Purpose of Study	Sample & Methods	Findings
Benner & Mistry (2007)	Explore the effects of teacher and mother expectations on academic achievement	522 low income urban youth ages 9-16 and youth's mothers and teachers. Secondary analysis of New Hope data collected and 5 years after in person interviews and surveys	Teacher expectations strongly influenced youth's own educational expectations
Cheng & Starks (2002)	Explore impact of the educational aspirations of parents, teachers, close relatives and peers on students' educational expectations	16,991 high school students. NELS: 88 survey data	Aspirations of close relatives and parents, not teachers and peers, affect high school students' educational expectations differently.
Gibbons & Borders (2010)	Explore differences in college-going expectations of middle school students	272 7 th grade students from southeastern state. Student and parent surveys	Direct relationship between school personnel support and positive outcome expectations for first generation college students
Holland & Farmer-Hinton (2009)	Explore the effects of school college culture (college talk, college preparation activities, teacher and counselor advocacy and hands-on support) on aspirations	9,723 Chicago public high school seniors. Consortium on Chicago School Research's Chicago Postsecondary Transition Survey	Access to a college culture at school affected college aspirations.
Mitchell & DellaMattera (2010)	Explore teacher support and students' self-efficacy beliefs	9,702 middle school students. The Student Speaks II Survey	Strong relationship between perceived teacher support and students' self-efficacy beliefs are not mediated by grade level.
Murdock, Anderman & Hodge (2000)	Explore students' school environment, motivation and behavior during the transition to high school	238 students. Data from students, teachers and district records gathered from 7 th and 9 th grade	Students' perceptions of teacher expectations, school experiences and benefits of education were more positive following the transition to high school.

2.2.4 College Talk

What students hear about colleges and careers from teachers, guidance counselors and other school-based personnel significantly influences the development and sustainability of their postsecondary aspirations. The importance of college talk, mindfully connecting the steps necessary to negotiate the college enrollment process, and its connection to the development and sustainability of educational aspirations has been the focus of recent research (Holland & Farmer-Hinton, 2009; Howard, 2003; Miron et al., 2009; M. Roderick et al., 2009).

Roderick, Nagaoka and Coca (2009) posit that the most consistent indicator of whether students successfully navigated the college enrollment process was the extent to which their high schools had strong “college-going climates” or whether teachers reported focused attention on both college-going curricular instruction and preparing and planning for college. Howard (2003) found that students perceived the lack of college talk as a signal that teachers and counselors did not believe that college was an option for them. In their work with the Kalamazoo Promise project, a program that provides college financial support for Kalamazoo public school students, Miron et al. (2009) found that the increase in talk about college-going positively impacted the educational aspirations of students.

Students who are considered underserved are less likely to attend schools where college talk is an integral part of the school culture. Positive messages related to college going can be limited to a few classes or among a select group of students. Given that so many students who are considered underserved must rely on school supports and interventions for college going information, college talk in urban schools is an important support in the development and formation of college aspirations and should be woven through instruction, included in school

activities, and integrated into the culture of the school. Table 2 summarizes the college talk and college and career aspirations studies.

Table 2: Summaries of College Talk and College and Career Aspirations Studies.

Study	Purpose of the Study	Sample & Methods	Findings
Gibbons & Borders (2010)	Explore differences in college-going expectations of middle school students	272 7 th grade students from southeastern state. Student and parent surveys	Direct relationship between school personnel support and positive outcome expectations for first generation college students
Gushue, Scanlan, Pantzer & Clarke (2006)	Explore the relationship between vocational identity and participation in career related activities	72 urban high school students. Survey	Students who had well developed ideas about their careers, had greater participation in career related activities and stronger aspirations
Holland & Farmer-Hinton (2009)	Explore the effects of school college culture (college talk, college preparation activities, teacher and counselor advocacy and hands-on support)	9,723 Chicago public high school seniors. Consortium on Chicago School Research's Chicago Postsecondary Transition Survey	Access to a college culture at school affected college aspirations.
Kenny, Blustein, Haase, Jackson & Perry (2006)	Explore relationship between career development and school engagement	416 9 th grade students. Pre and Post survey 30 hour career development intervention	Higher levels of career development in the beginning of the year were associated with increased levels of school engagement throughout the year.
Murdock, Anderman & Hodge (2000)	Explore students' school context, motivation and behavior during the transition to high school	238 students. Data from students, teachers and district records gathered from 7 th and 9 th grade	Students' perceptions of teacher expectations, school experiences and benefits of education were more positive following the transition to high school.
Pitre (2006)	Explore student perceptions of high school preparedness and college aspirations	127 9 th grade students. Survey data from Maryland Bridge Project	African American and white students who believed they were well prepared by their school had higher levels of college aspirations.

2.2.5 College Preparation Activities

Selecting college preparatory courses, attending summer programs, enrolling in academic enrichment classes, and utilizing tutoring and other academic support services can aid students as they prepare for college. Students with limited access to educational supports and college guidance often are not aware of or do not avail themselves of college preparation activities. This is particularly discouraging since students of minority backgrounds and low-income status remain underrepresented in college (Holland & Farmer-Hinton, 2009).

Pitre (2006) found in his study with 241 ninth and eleventh graders in the Maryland Bridge Project that African American students who felt school had not adequately prepared them for college were less likely to have college aspirations. In addition, he found that students were confused about the role school played in preparing them for college. Plank and Jordan (2001) found using NELS:88 (the National Educational Longitudinal Survey) survey data that students who are disadvantaged who participated in college preparation activities (e.g., preparation for college entrance exams, visiting college campus and gathering financial aid information) were more likely to enroll in college. Although limited research exists on the impact of college preparation activities on the educational aspirations of urban and students who are considered underserved, there is data to support the importance of helping students become better equipped to navigate the college enrollment process. Table 3 summarizes the college preparation activities and college and career aspirations studies.

Table 3: Summary of College Preparation Activities and College and Career Aspirations Studies.

Study	Purpose of Study	Sample & Methods	Findings
Gibbons, Borders, Wiles, Stephan & Davis (2006)	Explore career planning and resources	222 9 th graders. Survey of students Three areas: demographic, career exploration and planning and college knowledge Parent form: educational background, two open-ended college planning involvement questions	Students' college aspirations matched parents. Noted differences in college preparation activities for prospective first-generation college students versus others. Discrepancy between plans and accurate information about college costs and availability.
Gushue, Scanlan, Pantzer & Clarke (2006)	Explore the relationship between vocational identity and participation in career related activities	72 urban high school students. Survey	Students who had well developed ideas about their careers, had greater participation in career related activities and stronger aspirations.
Holland & Farmer-Hinton (2009)	Explore the effects of school college culture (college talk, college preparation activities, teacher and counselor advocacy and hands-on support)	9,723 Chicago public high school seniors. Consortium on Chicago School Research's Chicago Postsecondary Transition Survey	Access to a college culture at school affected college aspirations.
King, Madsen, Braverman, Paterson & Yancey (2008)	Explore career preparation aspirations and attitudes	91 urban 15-18 year olds. Focus groups	Identified eight sources of career information, career planning and decision-making.
Mau & Bikos (2000)	Explore role of school, family and background information on educational and vocational aspirations	14,915 participants 2 years after high school. NELS: 88 third follow-up	Type of high school, race and high school course track strongest predictors of educational and vocational aspirations.
Plank & Jordan (2001)	Explore influence of college preparation activities, guidance and information about higher education on postsecondary enrollment	24,599 students in 10 th grade, then 12 th grade and then 2 years after high school. National Education Longitudinal Study of 1988 (NELS: 88) survey data	More information about college, guidance and college planning actions were positively and significantly related to postsecondary enrollment.

2.2.6 Counselor Feedback/advocacy

Extensive research exists on the impact of counselor feedback and advocacy on the educational aspirations of students (Adelman & Gonzalez, 2006; Freeman, 1998; Holland & Farmer-Hinton, 2009; Hossler et al., 1999; Howard, 2003; McDonough & Calderone, 2006; McDonough et al., 1997; Muhammad, 2008; Perna, 2000; Pitre, 2006; Plank & Jordan, 2001). Counselors have considerable influence on the college and career aspirations of students while they are in the school for several reasons: they 1) are responsible for the coordination of college and career activities that support and assist students' understanding of college; 2) help parents and students understand why college is important; 3) assist in the navigation of the college application process; 4) help students select appropriate courses; 5) support, influence and provide feedback about the college selection process; and 6) serve as an advocate for the college-going culture of the school (Hossler et al., 1999). Researchers have found that the consistent and frequent availability of counselors to provide direct services to students and families positively affects students' educational aspirations (Adelman & Gonzalez, 2006; Plank & Jordan, 2001). Researchers have also found that regular meetings with counselors in middle and high school increased the probability of college enrollment in a four-year school (McDonough, 1997). Thus counselors play a pivotal role in how the school context shapes and promotes college-going behaviors and the college and career aspirations of students.

The research on the degree to which counselors positively or negatively impact the educational aspirations of students who are considered underserved is mixed. McDonough and Calderone (2006) found that for some low-income students, college counselors are one of the most important sources of college and financial aid information. Researchers have also found that students who are considered underserved in urban areas are more likely to receive little or

inaccurate information about college costs in comparison to their suburban counterparts (Freeman et al., 2005; Perna, 2000; Plank & Jordan, 2001). McDonough (2005) found that access to school counselors is restricted in many under-resourced urban schools and that in schools serving large numbers of low-income students, the average counselor to student ratio is 1,056 to 1. Plank and Jordan (2001) also found in their study of 63 college counselors in urban schools that the majority of counselors did not help parents with college application paperwork for admission or financial aid, and often provided advice to parents and students about where the student should enroll based on limited or inaccurate information regarding the family's ability to pay for college or actual college costs. In addition, this study found that college counselors spent much of their time on administrative tasks in the school building rather than providing college and career assistance to students. Some urban school counselors assumed, without good data, that families could not afford other educational opportunities; the counselors were more likely to refer students to community colleges than other postsecondary institutions. Pitre (2006) found that students with good grades were given more support by counselors because counselors perceived the students as "college bound" and therefore worthy of the time investment. Thus, those students for whom the most support was needed and who could benefit the most from additional support received less information about the college enrollment process. Table 4 summarizes the counselor feedback/advocacy and college and career aspirations studies.

Table 4: Summaries of Counselor Feedback/advocacy and College and Career Aspirations Studies.

Study	Purpose of Study	Sample & Methods	Findings
Brown & Trusty (2005)	Explore relation between career counseling programs and academic achievement	Review of literature	Found limited data to support the claim that career counseling programs actually increase achievement.
Farmer-Hinton & Adams (2006)	Explore high school counselors' perceptions and college counseling effectiveness	5 high school counselors from a college preparation charter school. Secondary data from mixed methods case study	Counselor support and feedback was connected to increased college aspirations.
Holland & Farmer-Hinton (2009)	Explore the effects of school college culture (college talk, college preparation activities, teacher and counselor advocacy and hands-on support)	9,723 Chicago public high school seniors. Consortium on Chicago School Research's Chicago Postsecondary Transition Survey	Access to a college culture at school affected college aspirations.
McDonough & Calderone (2006)	Explore perceived difference of college costs between school counselors and low-income families	63 urban high school counselors, students and families. Interviews	Counselor perceptions of minority families' financial concerns about college influenced the type and quality of college information they provided.
Muhammad (2008)	Explore relationship between college aspirations and counselor support	941 African American students. NELS:88 survey data	African American students' perceptions of counselor's expectations positively influenced college aspirations.
Perna, Rowan-Kenyon, Thomas & Bell (2008)	Investigate access and availability of college counseling and activities	Descriptive case studies of 15 high schools in five states.	Access and availability of college counseling varies across schools, districts and states.
Plank & Jordan (2001)	Explore influence of college preparation activities, guidance and information about higher education on postsecondary enrollment	24,599 students in 10 th grade, then 12 th grade and then 2 years after high school. National Education Longitudinal Study of 1988 (NELS: 88) survey data	More information about college, guidance and college planning actions were positively and significantly related to postsecondary enrollment.
West-Olatunji, Shure, Pringle, Adams & Cholewa (2010)	Explore impact of counselors' perceptions on college aspirations	3 high school counselors from predominately African American schools. Structured interviews	Unintentional counselor bias negatively impacted aspirations and sense of opportunity.

2.2.7 Sense of Belonging in School

Studies have shown that students who feel like they are a part of the social and academic networks of school and have a sense of “belonging” are more likely to aspire to college (Uwah et al., 2008). Because school is the primary social environment for many students, understanding how schools promote belonging through academic and social networks is critical to an analysis of the factors that lead to college and career aspirations. Developing a sense of belonging is especially acute for middle school students who are developmentally transitioning from parental dependence to personal independence and who are not yet able to navigate their day-to-day activities without support like many high school students can (Lee, Bryk, & Smith, 1993; Uwah et al., 2008). School then serves as the primary social and academic environment where students experience what it means to live and work in a safe and nurturing environment (Berand, 1992). Studies have also shown that students with a sense of belonging in school are more likely to utilize college planning resources and engage in college planning on their own (Howard et al., 2010). A sense of belonging has also been associated with a sense of competency and control. To be engaged in the environment, students need to feel that they can handle their school work and that the environment allows for some personal control and choice (Connell & Wellborn, 1991; Deci & Ryan, 1985).

Since college and career aspirations are embedded in academic engagement and school participation, a sense of belonging is crucial to the formation and sustainability of the postsecondary aspirations of urban adolescents. Empirical research exists documenting the ways in which school belonging mediates aspirations (Finn, 1989; Finn & Voelkl, 1993; Goodenow & Grady, 1993; Wehlage, 1989a, 1989b). In a study of 5,000 at-risk eighth-grade students, Finn (1993) found that a sense of belonging in school, particularly students’ perceptions of teacher

support, predicted some aspects of school participation and engagement. Goodenow and Grady (1993) found similar results in their study of 198 urban 7-9th graders. Despite high response rates on the self-reported academic motivation measures, similar to the responses of middle-class suburban students, urban students expressed far lower levels of school belonging, suggesting that urban students are as motivated as their suburban counterparts, but do not feel as valued. Table 5 summarizes the studies on sense of belonging and college and career aspirations.

Table 5: Summary of Sense of Belonging and College and Career Aspirations Studies.

Study	Purpose of Study	Sample & Methods	Findings
Goodenow & Grady (1993)	Explore relationship among sense of school belonging, academic motivation and perception of friend's academic values	301 urban junior high school students. Survey	Students with weak beliefs about belonging and school worth also had weak beliefs about teachers valuing them.
Murdock, Anderman & Hodge (2000)	Explore students' school context, motivation and behavior during the transition to high school	238 students. Data from students, teachers and district records gathered from 7 th and 9 th grade	Students' perceptions of teacher expectations, school experiences and benefits of education were more positive following the transition to high school.
Uwah, McMahon & Furlow (2008)	Explore relationship between school belonging, academic self-efficacy and educational aspirations	40 African-American low income high school males. 3 surveys, demographic, psychological and academic self-efficacy	School belonging and educational aspirations were related to students' perceptions of direct support and encouragement.

2.2.8 The Student Perspective

The previous sections of this review of the literature focused on how college and career aspirations and the supports that influence those aspirations have been operationalized and researched. However, important to this study are student perceptions of these supports and their usefulness as they relate to future planning.

The importance of understanding how students make sense of what happens in or in relation to school has been well documented in the literature (Brobst, Potere, & Jackson, 2006; Fouad, 1995; Gallant & Zhao, 2011; Jackson, Kacanski, Rust, & Beck, 2006; Kenny, Blustein, Chaves, Grossman, & Gallagher, 2003; Knight & Waxman, 1990; Plucker, 1998; Struyven, Dochy, & Janssens, 2003; Thiessen, 2007; Trusty & Harris, 1999; Waxman, 1989; Waxman & Huang, 1998). How students engage, reflect, and process the messages they receive and experiences they have in schooling is particularly important to college and career aspiration development. This is particularly critical given a study that utilizes a social cognitive frame, where social supports (e.g., teacher feedback) and experiences influence student perceptions and beliefs (self-efficacy) about their immediate and future plans. The majority of studies on students' perceptions of college and career supports explored how one particular aspect of a student's school life (e.g., counselor feedback/advocacy) influence aspirations (Farmer-Hinton & Adams, 2006; Muhammad, 2008; West-Olatunji et al., 2010). A small number of studies explored student perceptions and multiple college and career aspiration supports (Howard et al., 2010; Howard, 2003; Murdock et al., 2000; Roderick et al., 2009). Although these studies explored student perceptions across several supports, only one study (Holland & Farmer-Hinton, 2009) investigated student perceptions of multiple college and career supports. Still other studies focused on student perceptions of support for and perceived barriers to college (Dennis, Phinney,

& Chuateco, 2005; Howard et al., 2010; Kenny et al., 2003; Ojeda & Flores, 2008). Dennis et al. (2005) found that for ethnic college students, perceptions of a *lack* of support were more predictive of college outcomes than the presence of support. Others studies with a variety of samples found similar results in that student perceptions of perceived barriers negatively affected aspirations. Thus student perceptions are important to the development of college and career aspiration development.

Summary

It is hard to untangle the in- and out-of-school factors that influence and impact the college and career aspirations of urban middle school students. Clearly, the school context matters in the development and sustainability of college and career aspirations. A positive school environment can increase engagement (National Research Council and the Institute of Medicine, 2004) and mediate many of the negative effects of less malleable factors (e.g., low socio-economic status, lack of role models, and parental education). Thus engagement is critical to the development of aspirations.

Bedsworth, Colby, and Doctor (2006) posit that for a school to have a true college-going culture, conversations about grades, class schedules, and academic progress would revolve around the requirements for college, whether students are on track to achieve that goal, and how the school can support struggling students. A college-going culture is particularly important for adolescents with limited access to educated adults and information about college and careers, for they may not be aware of the connections between their experiences and performance in school and their college and career aspirations and future opportunities.

As the achievement gap widens in K-12 schooling, the gap in the number of urban students who are considered to be underserved that enroll in college also widens. These students continue to lose ground in both secondary and postsecondary education. If the supports at school can create a greater sense of self-efficacy towards college going and college planning, then students may engage more positively in the steps necessary to enroll in college. This is particularly true for middle school students. Research has documented middle school as a pivotal time in aspiration development and that many of the decisions made in middle school affect long-term career trajectories (Thiessen, 2007).

Long-term educational and career goals have been shown to positively affect the academic and personal lives of students (Downey & Ainsworth-Darnell, 2002; National Research Council and the Institute of Medicine, 2004). In their analyses of the National Educational Longitudinal Study (NELS) data, Downey and Ainsworth-Darnell (2002) found that tenth grade students of all ethnic groups who believed that school was important for getting a good job later on reported spending more time on homework and were rated less disruptive and more hardworking by their teachers. Educational and career aspirations have been shown to predict whether a student chooses to drop out of school even when the effects of achievement are controlled (National Research Council and the Institute of Medicine, 2004). Thus the development and sustainability of college and career aspirations are crucial to the long-term futures of all students, but are particularly important for middle school urban students who are considered to be underserved, the focus of this study.

2.3 THEORETICAL FRAMEWORK

The career development of adolescents is a dynamic process that is influenced by both personal and environmental factors (Super, 1980; Young, 1983) that interact in complex ways. During this process, adolescents develop and define their college and career aspirations. Thus the college and career aspirations of adolescents are affected by personal attributes, environmental factors and the perceptions of the relative power of these attributes and factors over their educational and career goals (Lent et al., 1994). Beliefs, experience, feedback, ability, and perceptions influence each other in varying ways across time thus allowing adolescents to adjust their behaviors and beliefs and reflect on their environments. Theories that seek to help researchers understand college and career aspiration development should include ways to measure the interaction of several core constructs: self-efficacy beliefs, outcome expectations, goals, and the impact of environmental supports and perceptions of barriers (Lent & Brown, 2006).

Though various theories may be applicable to the understanding of college and career aspirations, this section details the ways in which Social Cognitive Career Theory (SCCT) (Lent, Brown, & Hackett, 1994) provides a productive lens through which to understand the formation and development of middle school students' college and career aspirations. This is because of the following characteristics of SCCT. First, SCCT is congruent with what is well known about learning: adolescents are not simply products of their environments but are able to adapt and change as a result of their interpretations of their experiences and feedback they receive both in and out of school (Bandura, 1986), providing opportunity for altering their career trajectories; Secondly SCCT emphasizes the power of self-efficacy beliefs, which enable adolescents to believe in their ability to successfully meet the educational and occupational requirements needed

to achieve their goals and maintain those beliefs despite obstacles in their school environments. Thirdly SCCT accounts for the malleable nature of college and career aspirations over time. Fourthly SCCT accounts for the varying outcomes of adolescents experiencing the same nominal school environment. Finally SCCT has an empirical basis for accounting for development and changes in aspirations.

2.3.1 Social Cognitive Perspective

How individuals internalize, process, and use college and career information has been well researched (Anderson & Hearn, 1992; Bateman & Hossler, 1996; Brown et al., 2005; Freeman, Brown II, & Varady, 2005; Hossler & Stage, 1992; Hossler, Braxton, & Coopersmith, 1989; Kao & Tienda, 1998; Perna, 2000). Although multiple theoretical frameworks have been documented in the literature, the majority of the theoretical work on college and career aspirations is social cognitive theory. Advanced by Albert Bandura (1986), social cognitive theory (SCT) describes the dynamic way in which behavior, personal factors, and the environment interact and influence each other to create personal agency. The power of personal agency where individuals continually adjust, reflect and process information gained by experiences and perceptions in order to make long and short-term decisions that affect behavior and life trajectories, is the cornerstone of social cognitive theory. In this view, individuals are not simply reactionary but are shaped by the environment and in turn are proactive and self-reflecting (Pajares, 2002). Bandura called the results of these interactions “triadic reciprocity” which is represented in the following model:

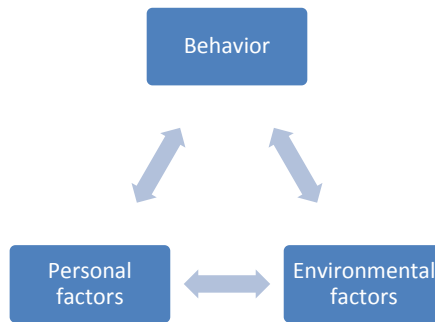


Figure 1: Triadic Reciprocity.

(Adapted from Pajares, 2002)

The power of self-efficacy in human functioning (Pajares, 2002) is a core component of SCT. From a social cognitive perspective, behavior and actions are affected by what individuals believe they can do, or believe is possible. Efficacy beliefs influence actions that are believed to result in a desired outcome, and promote the perseverance to overcome hurdles or barriers to goals. Self-efficacy beliefs influence whether interests, goals and ultimately, actions develop in particular areas (Gushue, Scanlan, Pantzer, & Clarke, 2006).

A social cognitive theory is a productive way to think about the college and career aspirations of middle schools students, because aspirations are malleable and can be influenced by the school environment, which can promote and shape students' feelings of efficacy towards academic and career endeavors. Since adolescents are both products and producers of their environments, the school context can affect how youth feel about school and can empower students to take proactive steps to engage in the learning process. This in turn can result in the development of long and short-term educational goals.

In addition to the above mentioned elements, social cognitive theory is useful for understanding college and career aspirations because it has a strong empirical basis and has been used to understand efficacy beliefs and behaviors in a variety of domains like medicine and

health promotion (Bandura, 2004; Bandura, 2000; Graves, 2003; Winters, Petosa, & Charlton, 2003); teacher training (Czerniak & Chiarelott, 1990; LaRose & Whitten, 2000; Pajares, 1993); human resources (Stajkovic & Luthans, 1998; Wood & Bandura, 1989); and athletics (Cunningham, Corprew, & Becker, 2009; Jones & Stuth, 1997; Sullivan & Kent, 2003).

2.3.2 Social Cognitive Career Theory

Social Cognitive Career Theory (SCCT; Lent, Brown, & Hackett, 1994) is one widely used application of Bandura's social cognitive work in the career development literature. Building on many of the constructs supported in the general social cognitive theory, SCCT is comprised of three "agentic" variables that represent the ways in which individuals exercise personal agency in career development: (1) self-efficacy, (2) outcome expectations, and (3) goals (Lent et al., 1999).

As noted in social cognitive theory, self-efficacy beliefs are a core component of SCCT and the "most central and pervasive mechanism of personal agency" (Lent, Brown, & Hackett, 1994, p. 83). In this model, self-efficacy is defined as a "dynamic set of personal beliefs that are linked to particular performance domains and activities and that interact in a complex way with other person, behavior and environmental factors" (Brown, Lent, & Hackett, 2002, p. 262).

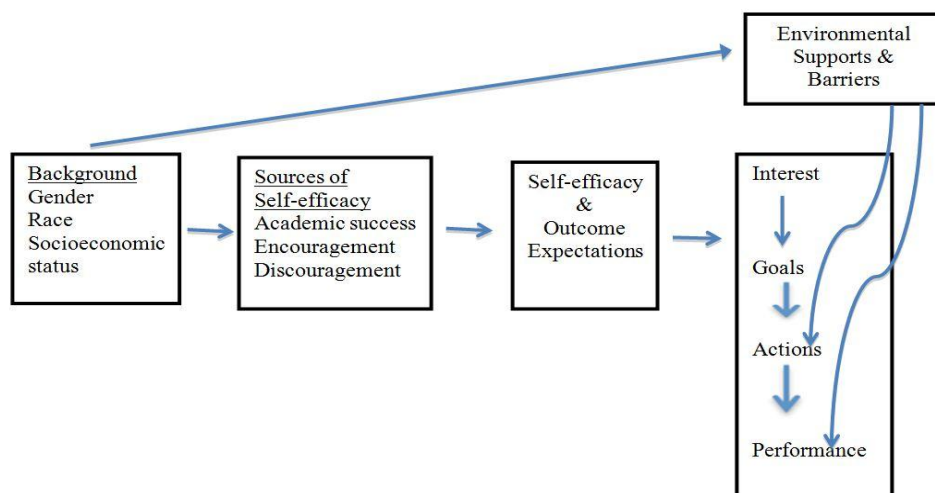
Although there are several sources of self-efficacy beliefs, in the context of schooling, personal performance mastery (e.g., academic success) and social persuasion (e.g., verbal encouragement and discouragement) have been shown to be important in the formation and development of college and career aspirations (Bandura et al., 1996; Benner & Mistry, 2007; Holland & Farmer-Hinton, 2009; Lent et al., 1999; Rothson et al., 2010). Academic success in school enhances students' self-efficacy beliefs about their current and future academic work.

Repeated academic failures diminish self-efficacy beliefs. Therefore, students who experience continued academic success are more likely to believe that college is a viable option. Although research has shown that academic success is a very important source of self-efficacy beliefs (Brown et al., 2005; Lent et al., 1999), social persuasion or the messages that students receive during school about their current and potential capabilities is also important to college and career aspiration development (Benner & Mistry, 2007; Mitchell & DellaMattera, 2011; Murdock et al., 2000). In addition to their accomplishments, students' beliefs about their talents, skills, and capabilities are shaped and influenced by their experiences in their environment (e.g., positive teacher support and feedback), making the school context important to formation and development of college and career aspirations.

The second agentic variable, outcome expectations, are the personal beliefs about the significance or results of performing certain tasks and actions (Lent, Brown, & Hackett, 1994). "Whereas self-efficacy beliefs are concerned with one's potential ability to accomplish a goal (Is this something I can do?), outcome expectations are related to the beliefs regarding the potential consequences of performing certain behaviors and actions (What will happen if I do this?)" (Lent, 2005, p. 104). Outcome expectations play a vital role in motivating behavior and include both intrinsic (e.g., pride in oneself for mastering something perceived to be difficult to accomplish) and extrinsic (e.g., reward for performing well) beliefs. Both self-efficacy beliefs and outcome expectations guide behavior in that one can believe in his/her ability to achieve a particular goal but not view success in that area as important enough to sustain the effort (Lent et al., 1994).

Goals, the third agentic variable, are defined as the determination to participate in a particular activity or to affect a preferred result (Lent et al., 1994). By setting goals, individuals

help to organize, guide, and sustain their behaviors over a period of time. Goal setting is also the primary way in which individuals exercise personal agency (Lent et al., 1994; Lent et al., 1999). Personal agency can be influenced both positively and negatively by personal accomplishment (e.g., academic performance) and environmental conditions (e.g., school climate) and can also affect self-efficacy beliefs and behaviors (Lent et al., 1994). In the context of the school environment, adolescents develop skills, interests, performance benchmarks, and varying degrees of confidence in particular areas. The student's interpretation of the skills, interests, and experiences help form expectations about future performance, interests (Ali & McWhirter, 2006) and the development of college and career aspirations.



(Adapted from Lent, Brown & Hackett, 1994)

Figure 2: Social Cognitive Career Theory Model.

SCCT can productively be applied to the study of college and career aspirations because it accounts for the ways that students negotiate the milestones and hurdles that impact their futures. SCCT also highlights situation-specific aspects of future behaviors, expectations, and environments of students. Social supports (e.g., parental involvement in school, teacher feedback, and peer support) influence academic and career self-efficacy beliefs, which in turn impact the formation and development of college and career aspirations. In addition, SCCT posits that career development is influenced by both objective and perceived environmental factors (Lent, Brown, & Hackett, 2000). Objective environmental factors like the quality of instruction in a school or the amount of educational resources provided in a district can affect the ways in which career and college aspirations are developed and shaped. Both knowingly and unknowingly, the extent to which a particular environmental factor affects college and career aspirations depends in part on the student's perception and the response to the environmental factor (Lent et al., 2000). School-based college and career enhancing activities like college visits are often prescribed as tools to promote college going and enhance aspirations. However, a campus visitation alone will not increase a student's aspiration to attend college; how a student processes and interprets the visitation may affect his/her aspirations. Researchers have also documented the ways in which college talk (e.g., the messages students receive during the college enrollment process) and college related activities (e.g., pre-college programs and SAT/ACT preparation) have enhanced the college and career aspirations of adolescents (Holland & Farmer-Hinton, 2009; Miron et al., 2009; Pitre, 2006; Roderick et al., 2008).

However, college related activities could be more powerful when they are contextualized so that students are able to make meaning of the experiences and relate that meaning to their ideas about their futures. Thus SCCT highlights the importance of not just "counting"

opportunities but understanding how the opportunity supports or allows an individual to acquire knowledge, process experiences, and reflect on how those experiences impact future thinking. In addition, subjective factors like students' perceptions of school supports (e.g., teachers' and counselors' feedback and advice), as they relate to college-going potential, have been shown to influence the college and career aspirations of students (Benner & Mistry, 2007; Mitchell & DellaMattera, 2011; Murdock et al., 2000). Students use the information, modeling and messages they receive to shape and form their aspirations. This process of developing, reshaping, and reframing outcome expectations and goals is important to the understanding of how the school context influences the college and career aspirations of urban middle school students because urban students are more likely than their non-urban counterparts to rely on the school environment for college and career related information (Adelman & Gonzalez, 2006; Holland & Farmer-Hinton, 2009; McDonough, 2005; Venezia & Kirst, 2005).

Using a SCCT frame to understand the development and formation of college and career aspirations is also useful because it emphasizes the power that personal agency affords students to affect their college and career trajectories. This is critical to the understanding of aspirations; the contemporary view of development stresses the need to account for the individual differences in developmental trajectories, and agency has been documented as an important way in which aspirations and outcome expectations differ despite exposure to similar environments (Bandura, 1982; Zimmerman, Bandura, & Martinez-Pons, 1992). The following vignette describes an application of a SCCT frame.

Aspirations, Pathways and Rose

Rose is a seventh grader in a large urban middle school. Although she dreams of going to college some day, her parents, both laborers, only have high school educations and see college as important but also very expensive. They tell Rose all the time she must work really hard in school because if she wants to go to college, she must earn good grades and a scholarship to help with the tuition. For this reason, Rose works very hard in her courses and earns good grades and the attention of her science teacher, Mr. Klug. After talking with Rose, Mr. Klug realizes that Rose wants to be a scientist so he arranges for her to attend a science fair at a local college. At the science fair, Rose meets several female undergraduates who tell her all about the courses and projects. Rose becomes more interested in a science career and tells her parents she plans to go to college to be a scientist. Rose's story describes the ways in which self-efficacy beliefs are reinforced by her parents, teacher, her experiences, and her academic success.

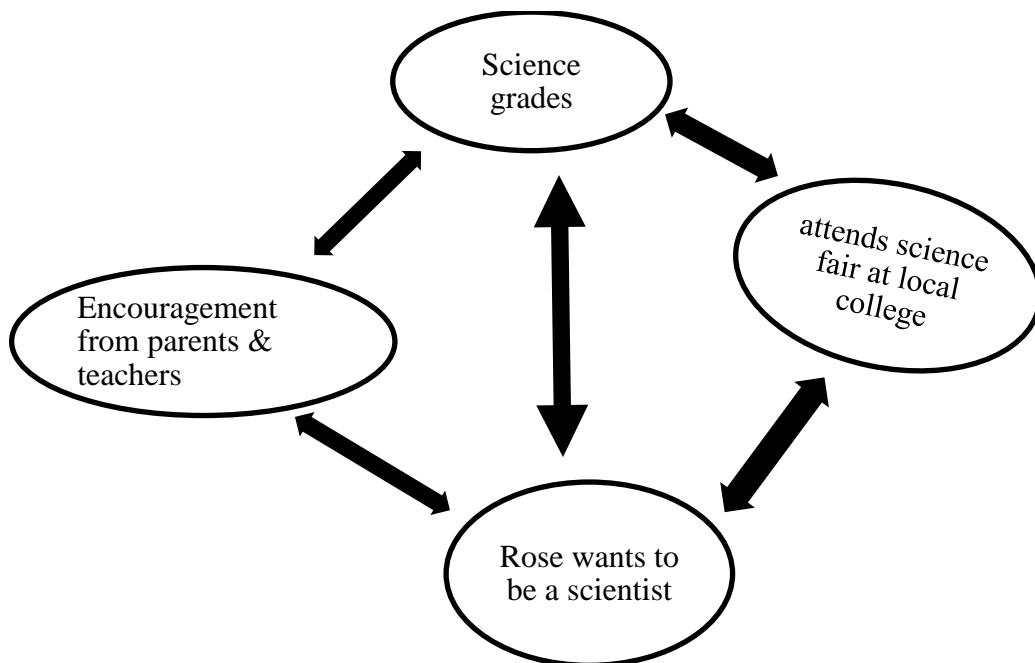


Figure 3: Aspiration Pathways and Rose.

The above example illustrates the ways in which SCCT can help researchers understand the college and career aspiration development of adolescents. In this example, Rose has the ability to excel in science. She receives support for school from her parents who communicate both through their behaviors and actions that she must work hard in school to go to college (parental support and involvement in school). Rose's science teacher, Mr. Klug, recognizes Rose's ability and interest and provides positive feedback and support around her science work. Mr. Klug also recommends a science program at a college campus (teacher feedback/support and college talk), which reinforces Rose's interest in science and exposes her to a college environment. Rose enjoys the college science program and, in turn, is more interested in science, and her aspirations for attending college are strengthened. Thus, Rose's environment (science class and college campus science program) and the important people in her life (parents and teachers) have positively influenced her career self-efficacy beliefs and aspiration development.

Research and SCCT

Considerable empirical support exists documenting the productivity of SCCT as a framework for investigating the college and career aspirations of adolescents (Ali & McWhirter, 2006; Fouad, 1995; Gibbons & Borders, 2010; Gushue, Scanlan, Pantzer, & Clarke, 2006; Mau & Bikos, 2000; Ojeda & Flores, 2008; Restubog, Florentino, & Garcia, 2010; Rogers & Creed, 2010; Schaub & Tokar, 2005). In a quantitative study of 414 Australian high school students using the SCCT framework, Rogers, Creed and Glendon (2008) found that social supports moderate the relationship between goals and planning, indicating that high levels of social support and high levels of goal setting result in greater planning activity. In another quantitative study, Gibbons

and Borders (2010) used SCCT to examine the college-related expectations of 272 seventh graders. This study found that students who would be the first in their families to attend college had lower self-efficacy, higher negative outcome expectations, and more perceived barriers than their non-first generation college going peers. Their research showed that SCCT was a useful way of conceptualizing the college aspirations of seventh graders.

Restubog, Florentino and Garcia (2010), in their quantitative study of 17-year-old international nursing students, found that contextual support (e.g., parental support and number of career counseling sessions received) influenced persistence and career-related self-efficacy. In a longitudinal study of the educational and vocational aspirations of minority and female students, Mau and Bikos (2000) found support for SCCT in that the career aspirations of the students were a result of self-efficacy and outcome expectations and were mediated by demographic and individual differences.

Ali and McWhirter (2006) also used SCCT to investigate the vocational/educational aspirations of youth. In their quantitative study of 338 11th grade students from rural Appalachia, they found that the SCCT variables of self-efficacy and outcome expectations were important components of career choice behaviors for adolescents. Flores and O'Brien (2002) found that career self-efficacy, parental support, and barriers were predictive of career choice for Mexican American females. Additionally, Wettersten et al. (2005) found that the contextual factors (social support and parent involvement) and self-efficacy were important in predicting the work and school attitudes of rural students.

These studies demonstrate that SCCT has utility in understanding the formation and development of the college and career aspirations of adolescents. Furthermore, these studies demonstrate that SCCT is a versatile theory that can be adapted to capture the characteristics of

different environments and varying grade levels, thus offering an appropriate framework for understanding the factors that influence the college and career aspirations of urban middle school students.

2.4 SIGNIFICANCE OF THE STUDY

Much research exists on the various in-school supports that have been theoretically, and to some extent empirically, shown to influence college and career aspiration development and sustainability (Adelman & Gonzalez, 2006; Ali & McWhirter, 2006; Brown & Trusty, 2005; Gibbons, Borders, Wiles, Stephan, & Davis, 2006; Goodenow & Grady, 1993; Holland & Farmer-Hinton, 2009; Hossler et al., 1999; Howard, 2003; King, Madsen, Braverman, Paterson, & Yancey, 2008; Mau & Bikos, 2000; McDonough, 1997; McDonough et al., 1997; Miron et al., 2009; Muhammad, 2008; Murdock et al., 2000; Pitre, 2006; Plank & Jordan, 2001; Restubog et al., 2010; Rowan-Kenyon et al., 2011; Trusty, 2000; West-Olatunji et al., 2010). By focusing on students' perceptions of their school environments, this study investigated the presence and utility of four supports identified in the literature as important to the development of college and career aspirations to better understand how school-based supports tap, develop and sustain the aspirations of urban seventh grade students. These supports include: teacher feedback/advocacy, college talk, college preparation activities and counselor feedback/advocacy.

As mentioned previously, this study investigated how the potentially malleable school-based factors influence and shape college and career aspirations. However, several other out-of-school and/or non-malleable supports have been identified in the literature as potentially influencing college and career aspirations including: parental involvement in school, sense of

belonging, and an array of personal and demographic characteristics (Bandura et al., 2001; Cheng & Starks, 2002; Garg et al., 2002; Hanson, 1994; Hill et al., 2004; Kao & Tienda, 1998; Smith, 2009; Smith & Fleming, 2006; Spera et al., 2009; Uwah et al., 2008). What students say in the survey about the presence and utility of college and career supports (e.g., participation in the Career Day) is influenced by both in-school and out-of-school factors but in as much as the methodology allows. I suspect that the impact of the participation in career planning activities is moderated by out-of-school factors such as parental expectations, though that moderation is beyond the limits of the current work (Baron & Kenny, 1986).

The literature on aspirations research has also identified several shortcomings in studies of college and career aspirations. Most important are the problems of time scales. The majority of studies fall into one of two categories: longitudinal measurement (thinking about aspirations developmentally) or point-in-time predictive models (thinking about aspirations experientially in limited time). Research suggests that student perceptions of the messages they receive about college and careers can have long term developmental effects (Atanda, 1999; Bandura, 1982; Borders & Gibbons, 2010; Lent et al., 1999). Designing studies to capture the effects of these messages has been notoriously challenging; researchers struggle to connect students' future behaviors with retrospective attributions, vis-a-vis the messages they have received along the way, often attributing future behavior to prior experiences since it is unclear how students internalized the messages. It is for this reason that this study focused on the shared understanding of the college and career aspiration-building supports and the messages that students receive. Shared understanding in this context means the extent to which the intentions and goals of the school-based supports described by the school administration are also the supports that students' perceive as present and useful (Henson, 1997). Since little is known

about the internalized effect of these supports, I hypothesize that students need multiple, repetitive opportunities to take up these affordances that build aspirations. Therefore, the shared understanding of college and career experiences and messages across environments is a key component of college and career aspiration development.

In addition, researchers have not seriously studied how various supports interact in the same in-school context. Most studies looked at one support and the effect (e.g., teacher talk and the effect) as if each support operated independently (Adelman & Gonzalez, 2006; Ali et al., 2005; Brown & Trusty, 2005; Gibbons et al., 2006; Goodenow & Grady, 1993; Hossler et al., 1999; Mau & Bikos, 2000; Miron et al., 2009; Muhammad, 2008; West-Olatunji et al., 2010). Others investigated the influence of two supports on aspirational development (Howard, 2003; Pitre, 2006; Plank & Jordan, 2001); however, only one prior study investigated all the supports identified in this proposal. That study, by Holland and Farmer-Hinton (2009), investigated how teacher feedback/advocacy, college talk, college preparation activities, and counselor feedback/advocacy influenced college and career aspirations via the presence of a college-going culture in high school. Their study focused on the size of the school as a determinant on students' perceptions of their engagement in a college-going culture. In contrast to the current study, that study only collected student perception data and did not collect data from school administrators or building staff on their perceptions of college going supports in the school. Finally, the study only included high school seniors who unlike middle school students may have more developed college and career aspirations.

Table 6 displays a comparison of the presence or absence of specific aspiration supports in the literature informing the current study.

Table 6: Comparisons of College and Career Aspirations Studies by Support.

Study/year	Teacher Feedback/ advocacy	Counselor Feedback/ advocacy	College Talk	College/Career Planning Activities
Adelman & Gonzalez, 2006		X		
Ali & McWhirter, 2006	X			
Brown & Trusty, 2005		X		
Gibbons, Borders, Wiles, Stephan & Davis, 2006				X
Goodenow & Grady, 1993	X			
Holland & Farmer-Hinton, 2009	X	X	X	X
Hossler, D., Schmit, J., & Vesper, N., 1999		X		
Howard, 2003	X		X	
King, Madsen, Braverman, Paterson & Yancey, 2008				X
Muhammad, 2008		X		
Mau & Bikos, 2000	X			
McDonough, 1997, 2005		X		
McDonough and Calderone, 2006		X		
Miron, Jones, & Young, 2009			X	
Murdock, Anderman & Hodge, 2000	X			
Pitre, 2006			X	X
Plank & Jordan, 2001	X	X		X
Restubog , Florentino & Garcia , 2010				X
Roderick, Nagaoka & Coca, 2009	X		X	
Rowan-Kenyon, Perna & Swan, 2011				X
Trusty, 2000	X			
West-Olatunji, Shure, Pringle, Adams, Lewis & Cholewa, 2010		X		

2.4.1 Rationale for Comprehensive Inventory of School-Based Supports

Because the focus of this work is on better understanding the connection between student perceptions of their school environments and the efforts of their schools to design experiences to support aspiration development, it is critical that all sources of aspiration support are identified in and included on the student survey. In contrast to other studies of aspirations with specific research interests based on specific supports, the current study necessarily included all present supports identified by school personnel and found in the research literature so as to understand students' real opportunities for aspiration support in schools. Although the current study does not build a coherence model across supports, it will uncover the relative saliency of school-based supports for both individual and groups of students. As such, it will work to inform schools about students' perceptions of the relative value of programmatic efforts.

2.5 RESEARCH QUESTIONS

This study investigated how four supports identified in the literature, teacher feedback/advocacy, college talk, college preparation activities and counselor feedback/advocacy, influence and support the college and career aspirations of seventh grade urban charter school students. For this work, *presence* is operationalized as respondents recognizing that the supports exist in their school. *Utility* is operationalized as respondents connecting the support in some way to their future planning.

The following major research questions were addressed in this study:

1. Which supports that are prominent in the research literature do two charter schools identify as present and important in their efforts to tap, develop and support the college and career aspirations of seventh grade students?
2. Which college and career aspiration supports identified in the literature and by school administrators and staff are perceived by seventh grade students to be present in their schools?
3. Which college and career aspiration supports identified in the literature and by school administrators and staff are perceived by seventh grade students to have utility?

3.0 METHODS

In this mixed-methods study, I researched seventh grade students' perceptions of the presence and utility of college and career aspiration supports in two urban charter middle schools. Three classes of data were collected and analyzed: student surveys; interviews with teachers, guidance counselors, and school leaders; and printed and web-based documents. The primary data source was an online survey administered to eighty-five seventh graders. The design of the survey instrument was informed by interviews as an initial effort to understand the school context in enough detail to ensure that the survey responses would be valid and reliable with respect to students' perceptions of both the presence and utility of the aspiration supports. In particular, this qualitative work (interviews with adults in the school and analysis of school documents) was intended to develop a survey that instantiated, in each school's context, the aspiration supports identified in the literature as being critical in predicting development and strength of college and career aspirations. Every effort was made to develop questions that directed the students to refer to their specific contexts when responding to the survey items. For example, a support identified in the literature is the role that talk from a guidance counselor about the future can play in aspiration development and support. Therefore, in this study's survey, questions related to perceptions of the frequency and utility of guidance counselor talk included the name of the guidance counselor at each school.

As such, the following research questions were addressed:

1. Which supports that are prominent in the research literature do two charter schools identify as present and important in their efforts to tap, develop and support the college and career aspirations of seventh grade students?
2. Which college and career aspiration supports identified in the literature and by school administrators and staff are perceived by seventh grade students to be present in their schools?
3. Which college and career aspiration supports identified in the literature and by school administrators and staff are perceived by seventh grade students to have utility?

3.1 SETTING AND SAMPLE

Two urban charter middle schools were chosen for this study for several reasons. First, the two urban charter schools selected serve students who are traditionally considered underserved and reflect national samples of urban students. An important goal of this study is to better understand the college and career aspiration development and supports for these students in particular, as studies have shown their likely reliance on school-based supports for information. Secondly, the schools have had noted academic success with this student population as measured by state testing results. I was interested in better understanding if, in this setting, academic success might be linked to college and career aspirations. I also wanted a sample of students who were on par by objective markers (standardized tests) with their suburban counterparts. Thirdly, both schools have a history of working with the University of Pittsburgh and the Center for Urban Education, thereby allowing me to leverage existing relationships with teachers and administrators. Finally, the charter system chosen has, as part of its mission statement, explicit

goals related to high academic achievement expectations, nurturing relationships with students, and building staff and a commitment to the educational success of students traditionally underserved in urban areas.

3.1.1 Charter Schools

“Charter schools are public schools that are established on the basis of a contract or charter that a private board holds with a charter authorizer over some pre-determined number of years” (Gleason, Clark, Tuttle, & Dwoyer, 2010, p. 1). Community groups, religious organizations, non-profit, and for-profit groups can establish charter schools. Charter schools are governed by the terms of the charter agreements. These agreements usually include more autonomy from state and district regulations than traditional public schools with respect to curriculum, staffing policies, and financial accountability. In exchange for this flexibility, charter schools are held accountable for documenting student outcomes. Charter schools that fail to meet the established guidelines and commitments of their charter can face sanctions by the authorizing agency, which can include, among other penalties, closure (Gleason et al., 2010; Miron & Nelson, 2002). Like other public schools, charter schools are typically open to students who reside in a defined geographic area or district if space is available; however, funding for charter schools is often allocated on a per student basis. Students who chose to enroll in a charter school bring with them a predetermined amount of “tuition” from their home school district, making sustainable enrollment critical to the operation of most charter schools. Generally, charters cannot charge additional tuition beyond what the home district provides (Gleason et al., 2010).

Since their inception in the 1990’s, the number of charter schools has grown dramatically. According to the National Alliance for Public Charter Schools, in 2010-2011 the

number of charter schools in the United States grew by 7.2 %, enrolling 1.7 million students in 5,277 schools (“NAPCS Dashboard - Schools - Overview - National - 2010-2011,” n.d.). Although this growth is significant, charter schools still only account for 5.4% of all public schools nationally with the majority of schools (52.3%) located in urban areas (“NAPCS Dashboard - Schools - Overview - National - 2010-2011,” n.d.).

The rise in the number of charter schools has led to increased interest in understanding their impact on student outcomes. The data on the impact of charter school enrollment on student outcomes is mixed. Some studies report that charter schools have made great improvements in student academic achievement. Others report there is little evidence that charter schools significantly increase academic achievement. In a large-scale randomized study of the effectiveness of charter schools, researchers found that the impact on academic achievement for middle school students varied significantly across schools (Gleason et al., 2010). This finding is similar to other studies that posit that the differences in student outcomes may be due to variations in the mission, management, accountability of the charter and, in some cases, the location and student draw (Lake & Gross, 2012). However, several studies have found that charter schools who served low income or low achieving students were more likely to have positive impacts on student academic achievement (Booker, Gilpatric, Gronberg, & Jansen, 2007; Furgeson et al., 2012; Gleason et al., 2010).

In sum, the extent to which enrollment in a charter school produces better academic outcomes for students than a traditional public school is unclear. However, there is strong data to suggest that charter schools with particular characteristics may be more likely to provide opportunities for some students’ to positively impact their academic achievement.

3.1.2 Charter Schools in Pennsylvania

Charter schools in Pennsylvania are self-managed public schools that are created by community leaders, teachers, parents, colleges and universities and are subject to approval by the school district in which the school is located and the Pennsylvania Department of Education (PDE) (“Pennsylvania Department of Education,” n.d.). The number of charter schools in Pennsylvania has risen over the past several years. The increase in the number of charter schools in Pennsylvania in 2010-11 was slightly higher than the national average; 12 schools opening resulted in a 8.9% increase (“NAPCS Dashboard - Schools - Overview - National - 2010-2011,” n.d.). Although the majority of charter schools in Pennsylvania are in the eastern part of the state, western Pennsylvania, and Allegheny County in particular, has seen a slight increase in new charter schools. In 2009-2010, there were 14 charter schools in Allegheny County as compared to 16 in 2011-2012 (“Pennsylvania Department of Education,” n.d.).

3.1.3 Setting

Sunrise Charter School System

Participants in this study were enrolled in one charter school system. “Sunrise” is a charter school system that operates within multiple urban districts in Western Pennsylvania. Sunrise was started in 2003 and is self-described as a catalyst for urban school reform. In 2010-2011, Sunrise served approximately 2,500 students from 21 different school districts within one county. Sunrise schools in general serve a diverse population of students within seven schools: five K-8 schools, one 9-12, and one K-12. In 2011 across all schools, 75% of students qualified for the

federal free/reduced cost lunch program, 66% were minority students and 15% had special needs (“Sunrise Schools: About Us,” 2012) ¹.

Students must complete an application to enroll in the Sunrise Charter system, with preference given to siblings of current students and students who reside in the school district. A lottery system is used for admission. In order to accept the offer of admission, families must submit the required forms and documents. Families are also encouraged to meet with the school staff to “make sure the school is right for their child” (“Pennsylvania Department of Education,” n.d.).

Sunrise has several features that made the schools in the system interesting spaces for this work. An interesting feature of the Sunrise is the explicit attention to the development and sustainability of a positive school environment. This focus on school culture is articulated through a series of documented school practices and beliefs that are embedded in instructional practices and promotional materials. As part of their focus on positive school culture, Sunrise explicitly outlines beliefs and practices around the development and nurturing of positive school personnel-student relationships. This focus on positive relationships, in particular teacher-student relationships, aligns well with aspiration research that highlights the power and influence these relationships can have on college and career aspirations (Ali & McWhirter, 2006; Goodenow & Grady, 1993; Holland & Farmer-Hinton, 2009; Murdock et al., 2000). Students at Sunrise schools also receive frequent and consistent messages regarding the school’s high expectations for both student achievement and positive behavior. These messages are also embedded in the articulated practices and belief structure of the school system. Sunrise promotes a common language and vocabulary around these ideas and messages, which are

¹ Name removed from source to maintain the anonymity of school. Redacted documents are not identified in the Bibliography.

² *High-poverty schools* are defined as public schools where more than 75 percent of the students are eligible for the

intended to provide consistency across school buildings in the charter system. This focus on high expectations is important to this study because research has shown that students who perceive their school as academically and personally supportive are more likely to have higher levels of achievement and aspirations (Uwah et al., 2008).

Students at Sunrise do not have organized school-based sports teams like many of their peers who attend other public schools in their neighborhoods. However, they do have multiple opportunities to interact with a diverse group of community-based programs (e.g., public theater and arts organizations). Opportunities to learn from and be exposed to individuals from a variety of career paths may broaden students' perceptions of those careers as potential future plans. Along with a focus on the arts, Sunrise has a strong focus on technology and the use of technology in classroom instruction. Seventh and eighth graders at many of the Sunrise schools have their own laptop computers in the classroom. The focus on technology is reinforced with science and technology programs often developed in partnerships from local universities, giving Sunrise students content, context, and exposure to individuals in those careers.

Two K-8 Sunrise schools, Mountain and Hillside, were selected for this study schools for several reasons. First, both schools serve a student body that is socio-economically disadvantaged and are classified as mid-high poverty (Mountain) and high poverty schools (Hilltop)². Secondly, Mountain and Hillside schools are appropriate sites to study aspiration development because students at both schools are achieving at higher levels than expected given

² *High-poverty schools* are defined as public schools where more than 75 percent of the students are eligible for the free or reduced-price lunch (FRPL) program, and *mid-high poverty schools* are those schools where 51 to 75 percent of students are eligible (U.S. Department of Education, National Center for Education Statistics, Common Core of Data (CCD), "Public Elementary/Secondary School Universe Survey," 2008–09).

the demographic background of the student bodies. As a result of these characteristics, the school leadership and I hypothesized that students there may be receiving more of their college and careers information from in-school sources as opposed to home or out-of-school sources and networks (Sunrise superintendent, personal communication, February 13, 2012). In addition, Mountain and Hillside schools have participated in research projects with the University of Pittsburgh School of Education and are interested in incorporating university-based research in their educational practices. Finally, these schools may be particularly interesting in the study of student aspirations because they systematically promote high academic achievement and expectations. Students who are traditionally considered underserved may be particularly influenced by school-based supports, as noted earlier (Adelman & Gonzalez, 2006; Holland & Farmer-Hinton, 2009; McDonough et al., 1997; Venezia & Kirst, 2005). As such, these sites in which students are both achieving and potentially influenced by school based programmatic efforts may be useful to the understanding of college and career aspiration development. This interaction is an important feature of these research sites, as there is little research on how schools can support the aspirational development of students who are traditionally considered underserved who are also achieving.

Mountain School

Mountain K-8 School opened in 2007 and in 2011-12 had a total school enrollment of 405 students. Mountain School has been recognized locally for its arts curriculum and nationally for significant gains in student achievement. The school maintains numerous partnerships with the local arts community, non-profit organizations, and a large research university. Some of the unique features of Mountain School include a longer school year and longer instructional day, small classes, a self-reported robust professional development program, and a 2 ½ hour literacy

block (PA Dept. of Education, Charter Annual Report, 2011). K-6 students follow a traditional model of transitioning from grade to grade. In seventh grade, however, teachers “loop” with their students through eighth grade, allowing teachers and students the opportunity to continue their relationships for two consecutive years.

Academically, Mountain School seventh grade students performed slightly lower than their seventh grade statewide counterparts in mathematics and higher in reading on the 2010-2011 Pennsylvania System of School Assessment (PSSA), a statewide exam administered to all students in the state that is often used to measure academic achievement. Seventh graders at Mountain who are economically disadvantaged scored better on the PSSA than the statewide average for students who are disadvantaged, in both mathematics and reading.

Mountain received high marks from parents, teachers, and students on the 2010-2011 end-of-year survey designed by the school to assess perceptions of school quality and culture. With respect to the quality of the school, 95% of teachers, 92% of parents, and 83% of students said their school maintains high academic standards. In addition, 91% of parents agreed the teachers really cared for them and their children, and 93% of parents reported that they were actively involved in their child’s education. Finally, 90% of parents reported that their children felt physically and emotionally safe at school (PA Dept. of Education, “Charter Annual Report,” 2011)³.

In sum, with the exception of some math scores, Mountain School students performed as well as and better than most students in the state on the PSSA. Survey data from students, families, and teachers indicated that Mountain School is a supportive environment where students feel valued, parents are involved, and expectations are high.

³ Ibid.

Hillside School

Hillside School opened in 2005 and in 2011-12 had a total school enrollment of 388. Hillside has received several prestigious national awards for increasing student achievement. Like Mountain, Hillside's programming includes a longer school year and longer instructional day, small classes, a self-reported powerful professional development program, and a 2 ½ hour literacy block (PA Dept. of Education, "Charter Annual Report," 2011)⁴. In its annual report to the state, Hillside did not highlight local partnerships. Unlike Mountain school, the seventh grade teachers at Hillside follow a traditional grade-to-grade transitional model and do not loop with their students.

Seventh grade students at Hillside have significantly outperformed their statewide counterparts. Results from the 2010-2011 PSSA statewide exam show that 90% of all Hillside seventh graders scored proficient or above in reading as compared to 76 % of seventh grade students in the state. On the Mathematics PSSA, 98% of all Hillside seventh graders scored proficient or above, as compared to 78% of the seventh graders in the state. Students who are economically disadvantaged also outperformed their statewide counterparts in reading and mathematics. As evidenced by their test scores, Hillside has had great academic success with students who have been traditionally underserved.

Hillside also received high marks from parents, teachers, and students on the end-of-year school administered survey designed to assess perceptions of school quality and culture. With respect to the quality of the school, 100% of teachers, 95% of parents, and 88% of students reported that their school maintains high academic standards. In Hillside's annual report to the state, they reported that the school is located in a high crime area. Despite the challenges of the

⁴ Name removed from source to maintain the anonymity of school. Redacted documents are not identified in the Bibliography.

location, 94% of parents, 85% of teachers, and 79% of students reported feeling emotionally and physically safe at the school (PA Dept. of Education, “Charter Annual Report,” 2011)⁵.

Summary

Mountain and Hillside schools have successfully enabled their students to achieve academic success as measured by their PSSA scores. In addition, both schools are of similar size in total enrollment and in the number of students enrolled in seventh grade. Both schools also score similarly well on other indicators that have been shown to produce positive academic outcomes and aspirations, such as high attendance rates and low student teacher ratios (Gutman & Midgley, 2000; Hill et al., 2004; Irvin, Meece, Byun, Farmer, & Hutchins, 2011). Table 7 provides a comparison of the PSSA data for both sites for both sites. Table 8 displays the same data for students who are economically disadvantaged.

Table 7: 2010-2011 Mountain & Hillside 7th Grade Students PSSA Scores.

School	PSSA Mathematics	PSSA Reading
Mountain 7 th graders	75%	79%
Hilltop 7 th graders	98%	90%
State Average all 7 th graders	78%	76%

⁵ Name removed from source to maintain the anonymity of school. Redacted documents are not identified in the Bibliography.

Table 8: PSSA Results for Seventh Graders who are Economically Disadvantaged.

School	PSSA Mathematics	PSSA Reading
Mountain 7 th graders	68%	71%
Hillside 7 th graders	97%	88%
State Average all 7 th graders	65%	60%

(PA Dept. of Education, “School Report Card,” n.d.)⁶

Despite similar enrollment numbers and performance markers, the population of students enrolled at Mountain and Hillside differ in several important ways. Perhaps the most significant difference in the student populations is the percentage of students eligible for free or reduced lunch. To qualify for the free or reduced lunch program, children must be from families with incomes at or below the poverty level⁷ (US Census Bureau, n.d.) and/or be the recipients of other financial subsidies to families (“Pennsylvania Department of Education, National School Lunch Program, 2012). In 2011-12, the majority of both Mountain and Hillside students were eligible for this program. Hillside serves a greater proportion of minority students than does Mountain. Only 22% of Hillside students identified themselves as white as compared to 60% at Mountain. In sum, both schools in the study serve urban students who are disadvantaged; however, the percentage of students who are economically disadvantaged and of minority background is greater at Hillside. Table 9 provides a comparison of the both schools.

⁶ Name removed from source to maintain the anonymity of school. Redacted documents are not identified in the Bibliography.

⁷ The poverty level annual income in 2011 for a family of four was \$22,314.

Table 9: Mountain and Hillside Study Body Comparison 2011-12.

	Mountain	Hillside
Attendance Rate	94%	95%
Student/Teacher Ratio	13:1	13:1
Total School Enrollment	405	388
Percentage of Students Eligible for Free/Reduced lunch	66 %	89%
Number of districts represented in student body	9	12
Percentage of White Students	60%	22%
Percentage of African American Students	32%	73%
Percentage of multiracial Students	8%	3%
Percentage of Students in other categories	0	2%

As described previously, the Sunrise schools and in particular, Mountain and Hillside schools, are appropriate sites for this study for several reasons: 1) the school system and the individual schools enroll significant numbers of students who are considered underserved; 2) there is an explicit focus on the development and sustainability of positive student-teacher relationships; 3) students receive consistent and frequent messages regarding expectations for high achievement and positive behavior; 4) students are exposed to and learn from a variety of non-school based individuals from a diverse set of careers; and 5) students have achieved higher levels of academic success.

3.1.4 Participants

School Personnel

Nine middle school teachers, two guidance counselors, and one principal were interviewed for this study. Due to scheduling conflicts, one principal and one teacher were not interviewed; however, data for the study were collected during a meeting. Mountain School participants included: five seventh grade teachers, the middle school guidance counselor, and principal. Hilltop School participants included: four seventh grade teachers, one eighth grade teacher, the guidance counselor, and the principal.

Students

The students selected for this study were seventh graders at Mountain and Hilltop schools. The student bodies at both schools share some similarities but also have some differences. The seventh grade classes at both schools are relatively the same size. However, Mountain has an equal distribution of girls and boys while Hilltop is predominately girls. Although the majority of students at both schools qualify for free/reduced lunch, a greater proportion of Hilltop seventh graders qualify for the program. Finally, the majority of Hilltop seventh graders are African American. The racial background of individual students was not collected for this study. However, it is included in the demographic table below. Table 10 displays the demographic information of all the seventh graders in Mountain and Hilltop schools.

Table 10: 2011-2012 Demographics of Seventh Graders.

7 th Grade Students	Mountain		Hillside	
Total	46		47	
Gender	23 M	23 F	17 M	30 F
Free/reduced Lunch	67%		94%	
White	50%		11%	
African American	44%		87%	
Multiracial	6%		2%	

3.2 METHODOLOGICAL APPROACH

In this section I describe the methodological approach and rationale for using a mixed methods approach for this study.

3.2.1 Mixed Methods Approach

To investigate how Mountain and Hillside schools tap, develop, and support the college and career aspirations of seventh graders, this study utilized a mixed methods approach. A mixed methods approach is appropriate for this study because it “focuses on collecting, analyzing, and mixing both quantitative and qualitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a

better understanding of research problems than either approach alone” (Creswell & Clark, 2007, p. 5). Surveys, interviews, and documents allow for a multi-layered source of data to answer the research questions.

Creswell (2007) outlines several reasons for using a mixed methods approach:

1. Mixed methods research provides strengths that offset the weaknesses of both quantitative and qualitative research.
2. Researchers are given permission to use all of the tools of data collection available rather than being restricted to the types of data collection typically associated with qualitative research or quantitative research.
3. Mixed methods research helps answer questions that cannot be answered by qualitative or quantitative approaches alone.
4. Mixed methods research is “practical” in the sense that the researcher is free to use all methods possible to address a research problem. It is also “practical” because individuals tend to solve problems using both numbers and words. (pp. 9-10)

A mixed methods approach enabled me to use information gathered from the school personnel interviews and the analysis of documents related to college and career planning to inform both the design of the survey and the interpretation of survey results. Introducing a survey that was based on questions related to perceptions of the presence of supports from the literature alone would risk administering a survey that was decontextualized from this sample’s experiences in the two schools. As a general methodological approach to survey design, administration, and interpretation, this mixed methods approach, with on the ground contextualization of both design and interpretation, was used to improve the inferences I can draw from analysis of the survey results.

3.2.2 Collection Procedures

Documents

I planned to collect professional development and curricular materials to provide evidence of the college and career development program. The purpose of this was to ensure that all aspects of the school's college and career programming were accurately reflected in the survey. There were no documents found that pertained to college and career planning for seventh graders. Therefore this effort to analyze school documents indicated that the survey questions related to curricular supports would not be appropriate for this sample of students.

Semi-Structured Interviews

Semi-structured interviews and meetings were conducted with school leaders, teachers, and guidance counselors from both schools. A semi-structured interview allowed the interviewees to expand on topics and areas they felt were important to better understanding the college and career supports that students would have direct and indirect exposure to in their school. This approach allowed me to discover programmatic efforts not originally included in the student survey or uncovered in the document analysis. In addition, data collected from the semi-structured interviews provided valuable information both in the development of the survey and interpretations of the survey responses.

Yin (2009) offers strengths and weaknesses of using texts from interviews as data sources. Interviews allow the researcher to focus on the specific topics in the study. Interviews can also allow the researcher to uncover nuanced information and possible connections. Some weaknesses of interview text as data sources include interviewer bias in question development and errors due to inaccurate recall (Yin, 2009). To reduce errors and strengthen the data of the

semi-structured interviews, I took accurate notes during the interviews and developed a protocol for asking interview questions. A copy of the interview protocol is included in Appendix A.

The data collected from the semi-structured interviews and meetings provided valuable information both in the development of the survey and interpretation of the survey responses. In addition, the semi-structured interviews and meetings gave me the appropriate student-centered language necessary for developing survey questions with, as much as possible, a shared referent. That is, it was important to construct items that referred to features of the school experience that the adults, the researcher, and the students would all interpret in similarly. For example, if a survey asks, how useful was your last school field trip, the referent might vary by students' judgments about different trips (one student missed the museum trip so is thinking about the trip to a college, another student went to the museum, etc.). In this study of student perceptions, it is crucial that the survey items provide the correct referent. For this reason, in this study every attempt was made to pose questions for which the referent was as clear as possible, to increase the validity and reliability of the data.

3.2.3 Survey Design and Content

Although I would have preferred to use a previously validated and reliable survey of college and career aspirations, no one instrument was found that was developed for urban middle school students that also included measures related to teacher feedback/advocacy, college preparation activities, college talk, and counselor feedback/advocacy. As noted earlier in the literature reviewed for this proposal, most studies of college and career aspirations have not explored the presence of multiple supports in the same in-school context. Additionally, no studies were found that measured the shared understanding of college and career aspiration supports from the

student, teacher, administrator, and counselor's perspectives. As a result, the survey instrument in this study is comprised of items adapted from several existing studies that more broadly address the issues under study in this work (Borders & Gibbons, 2010; Bundick, 2010; Holland & Farmer-Hinton, 2009; Hostrup, 2012). In studies intended to inform practice in particular, it is important not to be shackled to existing instrumentation. This study is novel in wanting to understand more about the presence and utility of all the supports identified in the literature and to contextualize survey items as much as possible to reduce variance in responses due to unclear referents.

The survey, which I titled the Middle School College and Career Aspirations Survey (MSCCAS), was developed using a combination of existing items and adapted items from previous studies (Bundick, 2010; Gibbons & Borders, 2010; Holland & Farmer-Hinton, 2009; Hostrup, 2012; A Voice from the Middle, 2007). Three questions (Q 6, 7 and 8) were taken directly from the Student Career Assessment survey (Hostrup, 2012). Several researchers at the University of Pittsburgh School of Education reviewed the survey. University researchers provided feedback on possible changes. Items were revised to reflect this feedback.

Middle School College and Career Aspirations Survey

The importance of asking questions related to students' perceptions of the presence of college and career supports has been well documented in the literature (Benner & Mistry, 2007; Mitchell & DellaMattera, 2011; Murdock et al., 2000). Students' beliefs about their personal capabilities are shaped and influenced by the environment. Thus students' perceptions of their school

environment has been shown to influence career self-efficacy and in turn, the formation and development of college and career aspirations.

The MSCCAS has four sections: (1) demographic information; (2) college and career aspirations; (3) students' perceptions of identified college and career supports in the school; and (4) students' perceptions of the utility of school-based college and career supports. A copy of the survey can be found in Appendix D.

Demographic Information

The demographic section of the survey includes items related to gender, parental education, and academic achievement. Research has shown that parental education, in particular the educational background of mothers, influences parental expectations for their children and children's aspirations for themselves (Holland & Farmer-Hinton, 2009; King et al., 2008). In addition, the academic achievement data, parental education, and parental marital status information allowed me to segment the responses across several categories.

College and Career Aspirations

The *College and Career Aspirations* section of the survey includes items related to students' college and career aspirations and knowledge of the steps necessary to achieve their goals. Items in this section are both open ended and multiple-choice questions. Responses to this section help the researcher understand the current college and career aspirations and the degree to which the students in the sample have internalized and operationalized their aspirations. Information regarding the state of aspirational development is important because studies have shown that 1) early, realistic and well developed aspirations are more stable over time and more likely to

persist despite challenges (Gushue et al., 2006; Lent & Brown, 2006; Trusty, 2000), and 2) during middle school, students acquire two key career related competencies: self-concept and perceptions of careers (Gottfredson, 2005; Tang et al., 2008). Examples of items in this section include open-ended questions about work after completing education and careers that appear attractive. Multiple choice questions included items about the achievement needed to graduate from different kinds of schools (Hostrup, 2012).

Students' Perceptions of Identified College and Career Supports in the School

The survey items were designed to allow students to express their knowledge of the school-based college and career supports they believed were present in their school. Items in this section are based on the four prominent supports identified in the literature: college talk, teacher advocacy/support, guidance counselor advocacy/support, and college preparation activities. Items in this section ask students to identify the supports present in their schools, and rate the frequency of their experiences and/or participation in them. Other questions ask students to express their beliefs about the presence of the supports in their school. These questions included five possible responses, ranging from totally true on the upper end of the scale to totally untrue on the lower end of the scale. This scale was modeled after other middle school surveys and was included after feedback from the seventh grade pilot group.

The survey items were informed by the semi-structured interviews and meetings with teachers, guidance counselors, and school leaders. Table 11 provides a summary of the instrumentation and the corresponding research question used for this study.

Table 11: Instrumentation Summary.

Research Question	Information Sources
1. Which supports that are prominent in the research literature do two charter schools identify as present and important in their efforts to tap, develop and support the college and career aspirations of seventh grade students?	Semi-structured Interviews: Interview protocol Appendix A Document Analysis: Curricular and professional development materials, state reports and school website.
2. Which college and career aspiration supports identified in the literature and by school administrators and staff are perceived by seventh grade students to be present in their schools?	Survey: Appendix D
3. Which college and career aspiration supports identified in the literature and by school administrators and staff are perceived by seventh grade students to have utility?	Survey: Appendix D

Variables and Measurement

In this section, I describe how I measured variables of interest in the study. In particular, I define salient features of each support in practice and indicate which items on the survey measure students' perceptions of the presence and utility of each support in their school lives.

College Talk

College Talk is the messages students receive and the interactions students have with adults in their school that help students connect the steps necessary to attend college and also communicate the value of college enrollment.

Presence of College Talk

Question 15 asked students their perceptions of how the adults in their school perceived the potential success of students there. Responses to this item indicated presence of college talk

based on the assumption that students would more likely respond to this item affirmatively if teachers were talking about college because teachers believed students would be successful.

Question 16 asked students to indicate how often teachers talk in their classes about college and planning for the future. Student responses would indicate the degree to which college talk is common.

Question 31 asked students to indicate how many adults knew what they wanted to do in the future. It was presumed that if adults knew about future plans, then conversations about the future had occurred. Therefore, this item indicates the frequency of college talk in the schools.

Utility of College Talk

Question 11 asked students to indicate the main way they learned about their careers. It was assumed that if students chose “someone from school”, it indicated not only that they had talked to someone at school (arguably frequency of college talk) but also that the talk might have been useful for them.

Teacher Feedback/advocacy

This variable was defined as interactions in which teachers provide advice for and convey support and encouragement of future planning and career goals. The literature distinguishes between more general, abstract talk about the future and specific discussions about individual students’ futures.

Presence of Teacher Feedback/advocacy

Question 17 asked students to indicate how frequently their teachers talked to them one-on-one about their college and career planning. Student responses indicated the degree to which teacher feedback/advocacy is present.

Question 19 asked students to indicate if their teachers tell them one-on-one how their work in class will help them in their future. Affirmative student responses (e.g., “totally true” and “mostly true”) indicated the presence of teacher feedback/advocacy.

Question 14 asked students if their teachers believed they could succeed in what they want to do. Responses in the “totally true” and “mostly true” categories would indicate that students perceived their teachers as conveying support for their future plans.

Question 18 asked students if their teachers believe they will graduate from high school. Affirmative answers indicated that students perceived their teachers to be supportive of their futures.

Question 20 asked students to indicate which teachers talked about college and careers in their classes. This question was added to help the school understand in which classes students perceived the presence of teacher feedback/advocacy. Patterns in responses indicated that students perceived greater levels of teacher feedback/advocacy in some classes more than others.

Utility of Teacher Feedback/advocacy

Question 25 asked students if their teachers knew a lot about what was needed to be successful in the future. Student responses that they believed this statement to be true would indicate that students perceived teachers as providing useful advice to them about the future.

Question 26 asked students how frequently *they* talked to their teachers their about college and career plans. It was assumed that the more students talked to their teachers about their plans, the more helpful they perceived their teachers to be.

Question 27 asked students to identify the teacher(s) they talked to about their college and career plans. Patterns of responses would indicate the teacher(s) students found most helpful. In addition, this question was added to provide information to the school about which teachers students found helpful as they planned for their futures.

Question 30 asked students to indicate if their teacher knew what they wanted to do in the future. Affirmative responses indicated that students found their teachers helpful and then shared their future plans with them.

Guidance Counselor Feedback/advocacy

This variable was defined as interactions with guidance counselors that provided support and encouragement for future planning and goals, provided advice on college and career planning, and championed the college and career mission of the school.

Presence of Guidance Counselor Feedback/advocacy

Questions 21 asked students to indicate if the guidance counselor talks about college and careers in their classes. Affirmative responses indicated that students perceived the guidance counselor as providing advice about college and careers.

Question 22 asked student to indicate if their guidance counselor talked to them one-on-one about their college and career planning. Affirmative responses indicated that students perceived the presence of guidance counselor feedback/advocacy.

Utility of Guidance Counselor Feedback/advocacy

Question 28 asked students to indicate how frequently they talked to their guidance counselor about their career plans. The frequency of students' responses indicated the degree to which students found their guidance counselor helpful as they planned for their futures. It was presumed that more frequent conversations indicated that students perceived their guidance counselor as more helpful to them as they planned for their futures.

Question 29 asked students to indicate the extent to which they perceived their guidance counselor as knowledgeable about what is needed to be successful in the future. Affirmative responses indicated that students perceived advice and support from their guidance counselor as useful as they planned for their futures.

College Preparation Activities

This variable was defined as the opportunities students had to obtain information about the college enrollment and the career exploration process. The responses to the following questions were used to measure college preparation activities.

Presence of College Preparation Activities

Question 12 asked students to indicate if they are taking steps toward their career goals. Positive responses were presumed to indicate the potential presence of college preparation activities.

Question 23 asked students if there were opportunities at their school to find out about college and careers. Affirmative student responses indicated the presence of college preparation activities.

Utility of College Preparation Activities

Question 24 asked students to indicate which activities were useful to them as they thought about their career plans. Pattern of response would indicate which school activities or programs students find most useful as they think about their career plans.

Questions 33 asked students to indicate if there is someone at school who really helps them prepare for their future. Affirmative responses indicated that students perceived someone at their school as useful to them as they prepare for the future.

Question 34 asked students to name the person who is most helpful to them as they prepare for the future. The name of the person was included to see if there were particular individuals at the school that students found most helpful as they planned for the future and their roles (e.g., guidance counselor, teacher, etc.).

3.3 DATA COLLECTION AND ANALYSIS

3.3.1 Data Collection

Along with another researcher from the University of Pittsburgh School of Education Center for Urban Education, I met with the superintendent of the charter school system and outlined the purpose of the study, the methods for collecting data and the data items needed from the school. The superintendent granted me permission to conduct the study. Prior to the launch of this study, I met with school personnel from both schools to explain the study. A sample student survey was submitted to each school leader for approval prior to administration. This study was

conducted in conjunction with the University of Pittsburgh School of Education Center for Urban Education. The Center for Urban Education has partnered with Sunrise on various research projects with a variety of foci. The current study was approved under an existing IRB approval form from the Office of Research at the University of Pittsburgh. Adults signed consent forms. The student survey was anonymous and conducted during the regular school day. The central school administration of Sunrise deemed that no student-level consent was necessary under the existing research agreement.

Document Analysis

School websites and annual reports submitted to the state department of education were reviewed. Teachers and guidance counselors were queried and asked to share curricula or other instructional materials. However, they did not have curricular materials related to college and career planning for seventh graders. Therefore I did not uncover any information pertinent to this study.

Semi-structured Interviews

Informal, semi-structured interviews and meetings were conducted with the school leaders, teachers, and guidance counselors at both schools. The purpose of the interviews and meetings was to discover the college and career aspiration development activities the school personnel perceived as present and having utility; this information would inform the design of the survey and aid in the interpretation of the survey results. At Mountain, interviews with teachers and the principal were conducted in a small group. I also toured the building during one of my visits to Mountain. At Hilltop, the teachers were interviewed in a small group. I met with the Hilltop

principal along with an eighth grade teacher who was also interning for principal certification. Interviews with guidance counselors at both schools were conducted individually.

The participants were asked to describe the programs/activities currently in place at their schools that they perceived as college and career aspiration supports, how the programs were implemented in the building, and which programs, if any, they perceived to be particularly useful to students. With the exception of the principal and one teacher at Hilltop, all of the interviews were audio recorded, which allowed me to ensure that all conversations were captured and interpreted accurately. Notes were kept to be sure the exact phrasing and detail of the activities the interviewees described was captured accurately. This phrasing was used in the survey. A sample of the interview questions can be found in Appendix A.

Due to difficulties in scheduling, I was not able to interview and audio tape the Hilltop principal. However, I did have a meeting with the Hilltop principal where I was able to address all of the themes in the interview protocol. In addition to this meeting, I had other communication with the Hilltop principal, including a comprehensive tour of the building during which we discussed the ethos of the school and the programmatic efforts in place to support students and student learning. Because of the nature of the circumstances, good notes were taken to capture all of the Hilltop principal's comments.

I transcribed the audio recordings. Audio recordings were reviewed multiple times to ensure accuracy. Interview comments were matched to supports themes. For example, teacher A comment "I sometime talk about how math relates to life" was matched to teacher feedback. I also looked for the specific language the school used for activities/programs related to college and career aspiration development. In addition, I looked for frequency patterns of responses and thematic patterns. A coding plan can be found in Appendix B. Information obtained during the

interviews was used to inform the document collection, inform the design of student survey items, and aid in the interpretation of the survey responses.

Student Survey

On the day of the survey administration, I read a script to the seventh graders in each class to introduce the survey, provide directions, and briefly explain the purpose for the survey. I informed the students that the survey was not a part of a graded assignment and that the survey responses would be anonymous. A copy of the script can be found in Appendix C. The survey was administered online using a Google Document survey tool.⁸ Students used computers in their classroom to complete the survey. The survey was untimed, allowing students to take as long as necessary to complete the survey. All questions needed to be answered for students to “submit” the survey. All surveys were completed in their entirety. This functionality of a computer-based method is actually an improvement over traditional pen and paper surveys in which missing data may affect the analysis. Eighty-five out of 93 (91%) possible seventh grade students completed the survey. I remained in the room during the administration to answer any questions from students. During the survey administration, students worked independently and asked a few questions. When students finished the surveys and submitted their responses, the data were immediately downloaded into web-based spreadsheets.

Students at Mountain took the survey as a group in the beginning of a class. Although the seventh grade was split into two classrooms, both groups of students took the survey at the same time. I remained in the room. Teachers from both classrooms stayed in the room and were available to answer questions.

⁸ More information on this tool can be found at <http://reviewofweb.com/google/guide-set-up-online-survey-poll-using-google-docs/>

At Hilltop, students took the survey in small groups at computers in the classroom. Students who were not taking the survey continued working on their class assignment. The seventh grade at Hilltop was comprised of two classes. Each class completed the survey in the same way. The teachers remained in the room during the survey. Along with myself, the teachers were available to answer student questions about the survey.

3.3.2 Data Analysis

Survey Results

The Middle School College and Career Aspirations Survey (MSCCAS) instrument consisted of three sections: 1) student demographics, 2) multiple choice questions, and 3) open-ended questions. The student demographic information and multiple-choice questions were analyzed using quantitative methods. The open-ended questions were analyzed both quantitatively and qualitatively as a way to understand students' written responses. All survey responses were imported into SPSS 20. The following section details the analysis of the items.

Open-ended Questions

For open-ended questions that required students to write in a response, I created groups based on responses on the MSCCAS. Numeric coding of all open-ended questions were inputted into SPSS for analysis.

To analyze open-ended questions related to students' career aspirations, responses were recoded in SPSS. These questions asked students to identify the careers they are interested in, list a reason why they think they would like it, and list three steps they can take to prepare for the

career. Student responses to the career identification question were put into two groups (those that listed one career and those that listed multiple careers) and recoded into dichotomous outcomes (1=one career, 2=more than one career). Based on the most often written-in student responses to which career they liked, a list of twelve frequent career groups was created. Student responses for the reason they thought they would like the career were divided into four categories: enjoyment, skill, wealth, and experiences. These categories were developed from patterns in student responses. For the question asking students to list three steps they can take in school to help prepare for their career, responses were recoded into dichotomous outcomes (1=could not list three steps, 2= listed three steps).

Open-ended questions for the teacher feedback/advocacy support were recoded in two ways. For the open-ended question that asked students to name a teacher(s) who talk about college and careers in their classes, student responses were recoded 0= listed a teacher's name or general response (e.g., all of them) and 1=no teachers (e.g., no one). For the question that asked students to list which teachers they talked to about their career plans, student responses were recoded 1= no teacher (e.g., none) and 2= listed a specific teacher/multiple teachers or a group of teachers (e.g., all of them).

The open-ended question for the utility of college planning activities asked students to list what school-based activities they found helpful as they think about their career plans. Three categories were generated based on student responses. Students who listed they did not find anything useful were recoded 1=nothing. Non-specific responses were recoded=2 (e.g., They talk to you about it). Career Day responses were recoded=3. Career Day was the only career planning activity identified by the schools as an organized college and career support activity that students might recognize.

Responses to the open-ended questions for college talk that asked students to list the person's name at school that really helps them think about their future were grouped into four categories. Students listing an unidentifiable response were recoded=0 (e.g., Chris). No one was recoded=1. Responses that included someone outside of school (e.g., my dad) were recoded=2. The name or names of teachers were recoded=3 and responses that named the guidance counselor were recoded=4.

Subset Analysis

To better understand how different groups of students perceived the presence and utility of the supports, three variables were created from the existing questions: academic achievement, parental education, and parent information.

Since studies have shown that higher levels of academic achievement are related to higher levels of aspirations (Rothson et al., 2010; Toldson et al., 2009), I was interested in exploring the perceptions of the supports for students who self-reported grades of mostly As and Bs on their last report card. To generate the academic achievement variable, students were assigned to one of two groups: high and low academic achievement. Students in the low group reported earning mostly Cs, Ds or Fs and were recoded=1. Students in the high academic achievement group reported earning mostly As and Bs and were recoded=2. There were 60 students (70.6%) in the high academic group and 25 students (29.4%) in the low academic group.

Parental education has been shown to mediate college and career aspirations (Hill et al., 2004; Smith-Maddox, 2000). Simply put, if a student's parent has attended or graduated from college, it is more likely that the student will attend or graduate from college. For the parental education variable, students were assigned to one of two groups: parent went to college or parent did not go to college. Students with parents who did not go to college were recoded=1. Students

with parents who attended college were recoded=2. There were 24 students (28%) in the group whose parents did not attend college and 61 students (76.8%) in the group who had parents who attended some college.

Children growing up in single-mother households experience higher rates of poverty than those growing up in married-couple households (“Family Structure | Child Trends Databank,” n.d.). The survey did not include information related to family income levels because the survey was anonymous and I did not think it was appropriate or even possible to ask seventh graders about their family income. I was interested to see if students from single-mother households perceived college and careers in ways that were different from students who lived with two parents. For the parent information variable, students were assigned one of three groups: live with two parents, live with mom only or live with other adults. Students who lived with other adults were recoded=0. Students who live with mom only were recoded=1 and students who lived with two parents were recoded=2. Eleven students (12.9%) were in the lived with other adult group. Twenty students (23.5%) were in the lived with mom only category and 54 students (63.5%) were in the lived with two parents category.

It can be argued that the sample, of which the majority of students qualified for free and reduced lunch, is a sample of students who are economically disadvantaged. However, parental education and marital status were meant to be indicators of socio-economic status and may not as such be true indications of a student’s socio-economic situation. Seventh grader self-reports may have produced some errors in the data. Given the anonymity of the survey and the lack of student specific data from the school or families, this interpretation is meant to be a rough cut at better understanding the perceptions of students who may be economically disadvantaged.

Multiple Choice Questions

The multiple-choice questions were analyzed quantitatively. Likert scales, as these tended to be, consist of levels that have an ordinal relationship, so statistics suitable to ordinal data were used. Quantitative statistics include descriptive statistics and frequency counts. Medians and chi squares were used to show how students perceived the presence and utility of the supports in total, by school and within groups. Statistics are reported on questions where the data showed significant differences. The following chart displays each item, by support and the statistical method associated with the item.

Table 12 and Table 13 describe how the data were analyzed by research question and the statistical method used.

Table 12: Analytic Plan RQ 2.

Support	Questions	Analysis
College talk	Q15, 16, 31	Frequencies
Teacher feedback/advocacy	Q14, 17, 18 & 19 Q20	Frequencies Open-ended: 2 groups – students who named a teacher and students who did not
Guidance counselor feedback	Q21 & 22	Combined: median, frequency Also analyzed differences between schools.
College planning activities	Q12 & 23	Combined: median

Table 13: Analytic Plan RQ 3.

Support	Questions	Analysis
College talk	Q11 & Q13	Multiple choice
Teacher feedback/advocacy	Q25 & 30 Q26 Q27	Combined: median, chi square and frequency Frequencies and chi square Open-ended: list teacher name or not and chi square
Guidance counselor feedback/advocacy	Q28 &29	Frequencies and chi square
College planning activities	Q24 Q33 Q34	Open-ended: looked for patterns of responses Frequency and chi square Open-ended: person's name generated categories and chi square

4.0 FINDINGS

This chapter reports the results for each of the three research questions for this study:

1. Which supports that are prominent in the research literature do two charter schools identify as present and important in their efforts to tap, develop, and support the college and career aspirations of seventh grade students?
2. Which college and career aspiration supports identified in the literature and by school administrators and staff are perceived by seventh grade students to be present in their schools?
3. Which college and career aspiration supports identified in the literature and by school administrators and staff are perceived by seventh grade students to have utility?

Results from the document analysis and semi-structured interviews and their impact on the development of the Middle School College and Career Aspiration Survey (MSCCAS) are reported first. Student responses to the MSCCA follow. As noted in the prior chapter, the study used both quantitative and qualitative questions for each measure. The responses to the question groupings provide data for the four measures on 1) college talk, 2) teacher feedback/advocacy, 3) guidance counselor feedback/advocacy, and 4) college preparation activities.

4.1 RESULTS RELATED TO THE SURVEY DESIGN

Research question one: Which supports that are prominent in the research literature do two charter schools identify as present and important in their efforts to tap, develop, and support the college and career aspirations of seventh grade students?

The three sources of data were used to answer research question one and aided in the design of the survey: feedback from a pilot group of seventh graders, an analysis of college and career related documents, and interview data from teachers, guidance counselors and principals.

Pilot Group Feedback

Since this survey was adapted from several existing instruments, some of which were designed for older students, the MSCCAS was piloted with a small group of seventh graders not in the sample. The students did not take the survey but reviewed the questions with me for clarity and understandability and provided feedback to me. Two categories of response options were changed on the survey as a result of the pilot group feedback. First, response for the length of time a student was interested in a career was changed from months (e.g., 3 to 12 months) to phrases (recently/this year). This change was made because the pilot group indicated seventh graders thought more about their careers in periods of time than in months. Secondly, the response options for multiple choice perception items were changed from strongly agree through strongly disagree to a scale of totally true through totally untrue. The pilot group indicated that using the “true” scale made the questions more accessible and less confusing.

Document Analysis

A document analysis of professional development materials and instructional materials and curricula for seventh graders used by the schools was planned to aid in the design of the survey. However, after interviewing the teachers, guidance counselors, and principals, I learned neither school had such materials. Teachers provided college and career information to students informally and not as a part of a structured curriculum. The guidance counselors did not have a curriculum or instructional materials for seventh graders. The teachers did not receive professional development for seventh grade college and career instruction.

Mountain school did have a professional learning community document that addressed college and career planning. However, the focus of the work was for eighth graders only. Since the service of the document collection was for the design of a survey for seventh graders, this document was not included in the analysis. The Mountain guidance counselor used some college and career planning tools. As part of an informal program, the guidance counselor had students complete an online career survey purchased from a vendor. The guidance counselor also used other tools from the vendor package as a guide for in class discussions with students. I could not access the survey or tools for analysis.

Both school websites included a notation of the Career Day on the calendar of events. No additional information about college and career planning was found. In sum, I did not uncover instructional or curriculum materials related to the college and career planning of seventh graders. Instead, this effort to analyze documents in the school indicated that questions on a survey related to specific curricular supports would not be appropriate for this sample of survey respondents.

Semi-Structured Interviews

Semi-structured interviews and meetings with seventh grade teachers, principals, and guidance counselors from both Mountain and Hilltop schools were conducted to inform the design and interpretation of the MSCCAS. In addition, the interviews, discussions and observations in the schools were in the service of better understanding the ethos of each school.

Neither school had a formal college and career development program aimed at increasing the aspirations of seventh graders. Both schools, however, did have some programming for eighth graders. Although a formal program was not in place for seventh graders, conversations with teachers indicated that their work with seventh graders might have been indirectly influenced by the eighth grade curriculum. When asked about their efforts to support college and career aspirations, teachers at both schools indicated they sometimes talked about college and careers in their classes but rarely talked to students one-on-one about their future plans. The majority of teacher talk in class about college and careers at both schools was sporadic and generic. Some teachers referenced the educational training needed for careers. Other teachers tried to connect the subject matter more broadly to life skills. Overall, teachers and principals at both schools indicated they needed to do more to support the college and career aspirations of the seventh graders in their buildings. In the following section, I describe the teacher and principal interview findings at each school followed by the guidance counselor interview findings.

Mountain Teacher and Principal Interview Results

The five Mountain seventh grade teachers and the principal indicated they do not have a formal college and career development plan for seventh graders. Teacher A indicated, and the other teachers and principal agreed, that much of their work in college and career planning is for

eighth graders. There is a plan for eighth graders that includes career projects and presentations as part of a career day that other students in the building, including seventh graders, get to experience. The teachers all indicated they planned this event with the principal and guidance counselor. During the interview I noticed that the teachers spoke very openly. Two teachers made reference to working with the principal on the college and career development planning. It appeared to me that the teachers and principal had a collaborative working relationship.

All five teachers indicated they “sometimes” talk about college and careers in their classes. They described the ways in which they spoke about college and careers as generic. Teacher A remarked that there is “not a lot of direct career focus in class.” However, two themes emerged from their comments. Teacher feedback/advocacy was nonspecific career based (e.g., “when you get job, you are going to need to know...”) or educational planning based (e.g., “what kind of education do you need for this career”). Two teachers indicated they talked about how their courses relate to potential jobs. Their classroom talk was “more career based” and the focus was more on “how they are going to apply this to their life”. One of the teachers, Teacher B, said he tries to apply the information in the course “to life more than how you would use it in college.”

Two other teachers indicated they try to connect the subject matter in their courses to careers and the education needed for the fields. Teacher C commented, “a lot of the readings out of the book do (talk about careers)... and I sometimes I talk about what education you need” and Teacher D agreed, stating students in her course write an essay on the “career they might want to have and the steps needed to get there”. However, one of the teachers, who indicated she worked mainly with students with special needs on transitioning, commented she talks to students about their career goals and aspirations for the future more frequently as part of their IEP.

All the teachers and the principal agreed that “Career Day” was their main college and career planning event. On a day near the end of the school year, seventh and eighth graders have the opportunity to speak with individuals from a variety of professions. Although mainly for eighth graders, the seventh graders attend and have the opportunity to interview individuals about their career. Teacher B indicated although the seventh graders have not participated in Career Day, they see it as a major event. The other teachers and the principal were in agreement. The teachers and principal mentioned and were in agreement that they perceived the conversations the guidance counselor had with students in their classrooms, albeit sporadic, as valuable to students. In addition to the conversations, the guidance counselor had students complete an online career interest survey. The teachers indicated they received a list of students’ career interests. It was unclear how, if at all, they used this information for instruction or motivation.

When I asked the teachers and principal what kind of information they thought seventh graders might need to develop their college and career aspirations, one teacher commented, “kids need to know there are options”. Teachers also thought if they could, they would have students job shadow. Teacher B remarked “four-year degrees are not the be all and end all. There are other options like technical school or the military...students need more information to go forward.”

The principal remarked that resources are a roadblock to visiting college campuses. He commented, “Last year we got a grant to buy career books and take trips for eighth graders...this year we have some money left over for Career Day... Last year our seventh graders visited a local college...we do not have our own buses”. He added that the cost to rent buses is very expensive, making trips to colleges difficult given limited resources.

I noticed when touring the building on another occasion that the teachers at Mountain had signs outside of their classrooms that said, “Ask me about”, with the name of the college(s) they attended. I asked the group why they did this and if students asked them about their college experience. The teachers said students ask them about the signs. The principal said that unlike having a banner or certificate up from a college, the “ask me about” is a way to spark conversations with students, so that teachers can talk about their personal experiences in college. All teachers in the building have a sign on their doors. The principal said this was a practice he brought with him from another school where he had worked. He brought it to Mountain because he wanted students to begin to think about their futures early in their educational careers.

Hilltop Teacher Interviews and Principal Meetings

Four seventh grade teachers indicated they do not have a formal college and career development curriculum. Two themes emerged from the interviews with the Hilltop teachers. First, how and to what extent they talked to students about college and careers in their classes was variable. Secondly, all the teachers conveyed a sense of support for the aspirations of their students. Teacher B said, “ We want students to have careers, not jobs”.

The teachers all agreed they do talk about college and careers in their classes; however, “individual teachers decide” how frequently and to what extent college and career talk is a part of instruction. Teacher A believed the teachers supported the aspiration development of their students “in small ways... in some of the projects we design”. Teacher B said “mine (talking about college and careers) is in XX subject comes up everyday. We point out random jobs that people have to do with XX...we just bring it up on a daily basis because there are a lot of jobs there”. The teachers were in agreement that college and career talk was informal and teachers

talked about college and careers “as it comes up.” Teacher C thought the bulk of college and career development work in the school was in eighth grade. This was confirmed in my meeting with the principal and in speaking with the guidance counselor.

Teacher A mentioned a career fair at the end of the year as an event that the school that supports college and career aspirations of students. The other teachers seemed to agree. All students in the school go to the career fair. Although the school did not have a formal curriculum for supporting the college and career aspirations of seventh graders, all the teachers were in agreement about what should be in such a curriculum. Teacher A commented, “Our students need to understand what careers entail (education and rigor).” Teacher B added, “Students need to know the difference between a job and a career. We kind of want to push them towards a career instead of just a job. They (the students) don’t get that either. Most of the parents at home just have jobs...they work very hard...but we want them to be at the career point...students need to understand you have to work hard.” Teacher A added, “Students need to understand the steps you need to take to get to that career.”

In the meeting with the principal, he indicated that the college and career planning and development work was done in eighth grade and that Hilltop did not have a formal curriculum for seventh graders. However, he did say that the guidance counselor worked with teachers and students in eighth grade. The principal indicated the career fair was a “big event” where students from the entire school have the opportunity to meet and interview individuals from the community who work in a variety of professions. While touring the building with him, I was struck by how many students, from elementary to middle school, came up to him and talked about their lives. We stopped in several classrooms and teachers and students greeted him with enthusiasm. In one elementary classroom, students lined up to show him their work. The

principal was keenly aware of what was happening in the entire building. I also got the sense that he regularly comes into classes as teachers and students seemed completely comfortable with our visit and interruption. As we walked through the building, the principal explained student projects on the walls. Before we walked into each classroom on the tour, the principal explained what the students were working on and the instructional practices of the teachers. In response to my questions regarding the challenges of providing college and career aspiration support for students who are considered underserved, the principal responded, “We try for each kid. We care for each one.”

Guidance Counselor Interviews

Mountain

The Mountain guidance counselor reported that he did not have a formal curriculum for seventh graders but he informally conducted three career exploration sessions in seventh grade classes. The sessions included discussions and work related to postsecondary and career options and life goals, as well as salary information for particular career paths. Students also completed an online career interest survey that the school had purchased with a grant. The guidance counselor met with students individually to review the career interest survey results. During the sessions he asked, “What do you want to be when you grow up?” The results were also shared with classroom teachers. How the teachers use the career interest and aspiration information was unclear.

The Mountain guidance counselor explained, “In this day of PSSA testing, I always thank the teachers for giving me their time so I can come in and talk to students.” He remarked teachers often stay in the back of the room during his sessions and sometimes become “co-

presenters”. Interestingly, Mountain has two guidance counselors: a K-4 counselor and a 5-8 counselor. The guidance counselor believed this structure was deliberate and part of the school’s focus on providing specific support to middle school students. In addition to this focus, the guidance counselor commented he does not serve a disciplinary role. The principals handle the student disciplinary issues. The guidance counselor remarked “I do not want them (the students) to look at me as a disciplinarian. I try to avoid it and the administration here has been very accommodating...I work on relationships with students.” The Mountain guidance counselor remarked working with a small number of students is an advantage. He said, “What I find is really helpful is the more time you can spend with them all, one-on-one, the better off they are. Everybody wants to be heard...One-on-one is the key...It seems to do more good than anything else.”

Hilltop

The guidance counselor at Hilltop said, “The majority of our college and career focus is with eighth graders. Last year we ended up asking each member of the staff what college they went to and what degrees they had and we all put signs up on the outsides of our doors saying “ask me about”... students had to go around the school and interview a staff member.” The guidance counselor said “we picked eighth grade (to do the career planning and focus) because they are the ones who are transitioning out to ninth grade and I thought at the time they would be better able to make those real life connections as opposed to our seventh grade.” The guidance counselor planned to conduct a self-reflection exercise with seventh graders in which they would do a project about their future but it was to take place after the survey was administered.

The Hilltop guidance counselor said she does not work with seventh graders individually on college and career planning. She said “I am in and out of the classroom but to be honest, I’ve never...I don’t think ever really had a conversation with any of them (seventh graders) about careers. I think that is something I need to change.” The guidance counselor believed in general that students needed more information on the details about college and the education needed for many careers. In addition the guidance counselor remarked “...I would love to have students visit college campuses so they could see what a campus looks like.” Although the school has strong connections with a local university, the guidance counselor said “No one has ever come in to present on ‘this is what college is’ or ‘this is what careers are...we do have a career day sponsored by our student council.” During career day, the students have the opportunity to ask individuals questions about their careers. However, the guidance counselor said “this is only an hour, one day.”

The guidance counselor said she believed the students in the school are connecting their work in class to future planning through the articulated set of habits, in particular the importance of working hard, that are displayed around the school and reinforced in the classroom. She said, “The students here have amazing potential. Amazing.” The guidance counselor remarked that many of the students in the school lived in challenging environments but she believed the school worked hard to help students reach their goals.

Summary

Neither school had a formal college and career development curriculum. Thus, data from the interviews with teachers, guidance counselors, and principals did not provide evidence that the survey should include specific activities or programs particular to the school environments.

However, the interview data did provide evidence that to varying degrees, college and career aspiration development supports are present in both schools. Of the four supports, college talk and teacher feedback/advocacy appeared to be most present. At Mountain, guidance counselor feedback/advocacy also appeared to be present and useful to students.

It appeared from the interviews that Mountain had college and career supports in place that were not as evident as Hilltop. Most importantly, the Mountain guidance counselor talked to seventh graders about college and career options and choices. Mountain also had a counselor dedicated to middle school students. I suspect this may have allowed the guidance counselor to devote more time to students in seventh grade. In addition, the teachers at Mountain also worked with eighth graders for which there was a college and career curriculum. Since the teachers “loop” with their students, it may be that some of the work they designed for eighth graders is indirectly integrated into seventh grade instruction.

The guidance counselor at Hilltop was responsible for all the students in the K-8 building and did not provide college and career support to seventh graders, only eighth graders. Although the guidance counselor initially remarked eighth grade was the optimal time to introduce college and career planning, as the interview progressed, the guidance counselor stated that more needed to be done with seventh graders in the school.

Several themes emerged from the interview data of both schools that are helpful to my understanding of the ethos of the schools and importantly, the context in which the results are analyzed. The school personnel at each site believed students could succeed in their future plans and saw themselves as playing important roles in their success. Both schools recognized the need for more focused and frequent college and career planning for seventh graders. These

findings are important given that the interviews were conducted to aid in the interpretation of the results as well as the design of the survey questions.

The analysis of the interviews and the pilot focus group feedback informed this survey design. The pilot group feedback provided student insight into the phrasing of Question 8 that asked students how long they have been interested in their career choice. As a result, the question responses are general periods of time (e.g., as long as I can remember) instead of numerical time periods (e.g., less than 3months). As a result of the pilot group feedback, the response sets for several questions were made less confusing by using responses in the “true, mostly true, etc.” grouping. The interviews and documents did not uncover specific activities to be included by name. The name of the guidance counselor was included in each school survey.

A copy of the survey can be found in Appendix D.

4.2 MSCCAS SURVEY RESULTS

4.2.1 Introduction

The MSCCAS is divided into four sections of questions: 1) demographic information of students, 2) students’ college and career aspirations, 3) perceptions of the presence of the college and career supports (used to answer research question two), and 4) the utility of the college and career supports (used to answer research question three). This section describes the results for the questions in the four sections of the survey, beginning with the demographic information and students’ college and career aspirations before going on to describe the results for sections three and four which were used to answer research questions two and three.

Respondents

Eighty-five seventh graders participated in the study and completed the online Middle School College and Career Aspiration Survey (MSCCAS). Of the 46 seventh graders at Mountain School, 40 completed the survey (87%): 19 boys (48%) and 21 girls (52%). Forty-five of the 47 seventh graders at Hilltop completed the online survey (96%): 16 boys (36%) and 29 girls (64%). Table 14 displays the descriptive statistics for the survey respondents.

Table 14: Summary of Respondents by School.

School	# Respondents	Total 7th graders	Gender	
Mountain	40 (87%)	46	19 M (48%)	21 F (52%)
Hilltop	45 (96%)	47	16 M (36%)	29 F (64%)

4.2.2 Demographic Results

The first four items on the MSCCAS ask students to provide information about their gender, family background, and academic achievement. This sample represents 91% of the total seventh graders at both schools. More girls (n=50, 59%) than boys completed the survey. Both Mountain and Hilltop had more girls than boys complete the survey, with the number of girls above 50%. However, Hilltop had 29 girls complete the survey, which is 64.4% of the sample.

The majority of students, fifty-three or 63%, reported living with two parents most of the time and 20 students (24%) reported living with their mother only. The percentage of students living with two parents was higher for Mountain with 70% of students reporting in this category and only 57.8% reporting in the same category at Hilltop. The students who completed the

MSCCAS were from more educated homes than would be expected when compared to national samples of students attending mid-high to high poverty schools. Of all of the students who completed the MSCCAS, sixty-one students (72%) indicated their parent/caregiver had completed some postsecondary education. In this category, Mountain and Hilltop had similar responses. Only two students indicated on the survey that their parent/caregiver had not finished high school.

The majority of students at both schools reported earning high marks in school. Of the students who completed the survey, sixty students (71%) reported earning A/Bs on their last report card. Students in the high achievement group were similarly distributed across the two schools. Table 15 displays selected demographic information of the survey respondents.

Table 15: Selected Demographics of MSCCAS Survey Respondents.

	Mountain	Hilltop	All Students
# Students	40	45	85
# Girls	21 (52.5%)	29 (64.4%)	50 (58.8%)
Live with 2 parents	28 (70%)	26 (57.8%)	54 (63.5%)
Live with mom only	9 (22.5%)	11 (24.4%)	20 (23.5%)
A/Bs last report card	28 (70%)	32 (71.1%)	60 (70.6%)
Parent some college	30 (75%)	31 (68.9%)	61 (71.8%)

A chi square test was performed to examine the relation between academic achievement and parental education. The relation between these variables was significant, $\chi^2(1,85) = 6.83$, $p = .009$. Students who self-reported earning As and Bs on their last report card were more likely

to have parents who attended some college. Table 16 displays the distribution of students by academic grouping and parental education.

Table 16: Academic Grouping by Parental Education.

Academic Group	No parent to college	Parent some college	Total
Low Academic Group	12	13	25
High Academic Group	12	48	60
Total	24	61	85

4.2.3 College and Career Aspirations

Items five through ten asked students to indicate their current educational and career aspirations. Question five asked students to indicate the highest level of education they thought they would complete. Forty-two students (49%) indicated a college degree was the highest level of education they thought they would earn. Eight (9%) students from Mountain wrote in “graduate school” in the other category. Eleven (13%) students indicated medical school was the highest level of education they thought they would complete and six (7%) indicated law school. Four (5%) students indicated they thought high school would be the highest level of education that they would complete, four (5%) responded technical or trade school, one (1%) responded some technical/trade school, and three (4%) indicated some high school. Five (6%) of students provided a response in “other” that was ambiguous and could not be counted in any of the existing categories.

Very few students in the sample expected to only earn a high school degree and even fewer expected not to finish high school. Of the students who did not expect to finish high

school, two (5%) were from Mountain and one (2%) from Hilltop. Slightly more Mountain students than Hilltop students indicated that they thought high school was the highest education level that they would complete. A small number of students at both schools indicated that some technical/trade school or a technical/trade school degree was the highest education level they would complete.

The majority of Hilltop students, twenty-eight or 62%, indicated that a college degree was the highest level of education they thought they would complete. More Mountain students—19 or 48% expected to earn professional degrees. Table 17 displays the results from the college and career aspiration questions.

Table 17: Highest Educational Aspirations Comparison.

Educational Aspirations	Mountain	Hilltop	All Students
Some high school	2 (5%)	1 (2%)	3 (4%)
High school	3 (8%)	1 (2%)	4 (5%)
Some technical/trade school	0	1 (2%)	1 (1%)
Trade school/technical degree	1 (3%)	3 (7%)	4 (5%)
College degree	13 (33%)	28 (62%)	42 (49%)
Graduate school	8 (20%)	0	8 (20%)
Medical school	8 (20%)	3 (7%)	11 (13%)
Law school	3 (8%)	3 (7%)	6 (7%)
Other	2 (5%)	5 (11%)	7 (6%)

Questions six and seven are open-ended questions. Question six asked students to write in the career they would like to have after completing their education. Question seven asked students to state why they thought they might like this career. All students were able to write one or more sentences describing why they selected the career. Student responses for question six were distributed among 12 career-related categories. The most popular student responses

were clustered in five career categories: multiple (two plus unrelated careers), arts, professional athletics, healthcare (non-physician), and physician. Fifteen or 18% of students listed more than two unrelated careers. Multiple career choice responses ranged from two career choices (e.g., “being in the NFL or NBA or be a phsicalical [sic] therapist”) to several choices (e.g., “fashion designer, choreographer [sic] veterinarian, artist and actor”). More Hilltop students responded with multiple career choices—12 or 27%—than Mountain students—three or 8%. Students with parents who had some college education were more likely to list more than one career. Of the 15 students who indicated more than one career, thirteen students had parents with some college education.

A career in professional sports was one of the most popular choices among students across both schools. Ten (12%) students responded they would like to have careers in professional sports after completing their education. Careers in the arts were also popular. Responses in this category included careers such as actor/actress, dancer, and singer. Additional frequent responses were in the general healthcare and physician categories. Table 18 displays a selected categorical comparison of students’ career aspirations.

Table 18: Selected Categorical Comparison of Career Aspirations.

Career Category*	Mountain N=40	Hilltop N=45	All Students N=85
Multiple careers	3 (8%)	12 (27%)	15 (18%)
Arts	5 (13%)	6 (20%)	11 (13%)
Professional sports	4 (10%)	6 (13%)	10 (12%)
Healthcare (non-physician)	6 (15%)	3 (7%)	9 (11%)
Physician	4 (10%)	4 (9%)	8 (9%)

*Categories generated by researcher

Question seven asked students to explain why they selected the career they did. An important part of career exploration is the understanding as to why a career might be a good fit. Open-ended responses were analyzed for response patterns. I generated four categories as a result of the analysis. Student responses were coded into four categories: (1) experiences (“I have been doing this....”), (2) enjoyment (“Because I love....”), (3) skill (“I am kind of good at....”), and (4) wealth (“Because you get to argue for money”). The majority of students—sixty-eight or 80%--responded that the main reason they wanted the career was because they enjoyed the work or the overarching idea of the career. Examples of responses in the enjoyment category included such things as, “I like helping people...,” “I like animals and want to help them...,” and “I enjoy children.” The second most frequent responses were in the skill category. Ten (12%) of the students responded that they had skill and ability in the career area. Some examples of responses in this category include. “I am kind of good in math...,” and “I am really good at basketball.” A few students (three) listed experiences (e.g., “I have always played doctor...,” and “I have been in acting classes”) as the reasons why they liked a career. Fewer students (four) indicated wealth (e.g., “Because I would make a lot of money”) as a reason for a career. Table 19 displays students’ reasons for selecting careers.

Table 19: Summary of Responses: Reason for Career Interest.

Category*	Frequency	Percentage
Enjoyment	68	80%
Skill	10	12%
Wealth	4	5%
Experiences	3	4%

*Categories generated by researcher

Question eight asked students to indicate how long they have been interested in the career. Students had four possible response choices: for a few years; for as long as I can

remember; recently (this year), and since I was in elementary school. The most frequent student response was “for as long as I can remember” with 35 (41%) choosing this response, followed by “since elementary school” with 20 (23%) choosing this response. Table 20 displays for how long students’ were interested in a career.

Table 20: Question 8: Summary of Responses to Duration of Career Interest.

Duration of Career Interest	Frequency	Percent
For as long as I can remember	35	41%
Since I was in elementary school	20	24%
For a few years	16	19%
Recently (this year)	14	17%

The results from this question are reported in the findings; however, they were not used in the final analysis of the data. The response options were not distinct enough and may have confused some of the respondents. For example response option “for a few years” is the same time period as “since I was in elementary school” for students who are in seventh grade. This ambiguity made it difficult to determine the extent to which students understood the question.

Question nine was an open-ended question that asked students to list three steps they can take to prepare themselves for their careers while they are in school. The majority of students who completed the MSCCAS were able to list three steps they could take to prepare for their career. Of the 85 students who completed the MSCCAS, seventeen (20%) did not list three steps.

The ability to list steps that can be taken during middle school may indicate that students were mindful that achieving a career takes planning. It may also mean that students might see a connection between their work in school and their long term plans. Since this was an open-ended question it was difficult to assess the quality of student responses. Therefore student

responses were only grouped by listing three steps or not listing three steps. Table 21 displays the responses to question nine by school.

Table 21: List Three Steps to Prepare for Career.

School	Did Not List 3 Steps	Listed 3 Steps	Total
Mountain	10	30	40
Hilltop	7	38	45
Total	17	68	85

The last item in the College and Career Aspirations section asked students to select the highest level of education that they think they will need to be successful in the career they selected in question six. College/university and medical school were the most frequent responses with 36 (42%) students choosing the former and 20 (24%) students choosing the later. The other responses were spread across the other categories. The data by school was very similar with the majority of responses in the college/university and professional/graduate school categories. However, four (5%) students out of 85 respondents selected high school as the highest level of education they thought they would need for their career.

Most students who completed the MSCCAS were able to match their highest educational level to the educational background needed for the career they chose. However, the three students who indicated some high school was the highest degree they thought they would complete also selected that they would need a college degree or graduate school for their career choice on another question. The four responses were distributed evenly across both schools.

Table 22 displays responses to question ten for all respondents and Table 23 displays the responses by school.

Table 22: Highest Level of Education Expected: Summary of Responses.

Highest Level of Education Expected	Frequency	Percent
College/university	36	42%
Medical school	20	24%
Technical/trade school	7	8%
Law school	7	8%
Graduate school	6	7%
Other	3	4%
Community college	2	2%

Table 23: Highest Level of Education Expected by School.

School	College/univ	Medical school	Tech/trade school	Law school	Grad school	Other	Community College
Mountain	16	10	3	3	4	1	1
Hilltop	21	10	4	4	2	1	1
Total	37	20	7	7	6	2	2

Summary

The majority of students who completed the MSCCAS are high achieving students from two parent families. Most students have parents who had some college education. However students who reported earning high grades on their last report card were more likely to have parents with some college education. This finding is consistent with other studies that found that parental education and academic achievement can be related (Bandura, et al., 2001; Ojeda & Flores, 2008). The students in the sample reported a variety of career aspirations. Overall, the students in the sample had high aspirations for their futures, with most students aspiring to some postsecondary education. In general, student response did not vary across schools with the

exception of with whom students live. More Mountain students (70%) reported living with two parents than Hilltop students (57.8%).

4.2.4 Results for Research Question Two

Findings for research question two—*which college and career aspiration supports identified in the literature and by school administrators and staff are perceived by seventh grade students to be present in their schools?*—are categorized by support and include the related MSCCAS items. The survey items are based on four college and career supports. They are (1) college talk, (2) teacher feedback/advocacy, (3) counselor feedback/advocacy, and (4) college planning activities. The survey response scales had five gradations. Some questions asked students to indicate the degree of truth with the statement on a five-point scale. Options for these questions were 1=totally untrue, 2=mostly untrue, 3=somewhat true, 4=mostly true and 5= totally true. Questions that asked students how much time they experienced a particular support had response options of 1=never, 2=rarely, 3=sometimes, 4=often and 5=frequently. Multiple-choice questions asked students to make a selection from a set of choices. Finally, open-ended questions allowed students to write in their own response.

College Talk

Questions 15, 16, and 31 comprise the presence of college talk measure. Questions in this section asked students to indicate the extent to which they perceive talk about college and future planning while at school.

Questions 15 and 16 asked students their perceptions of how the adults in their school perceived the potential success of students there and how frequently they noticed that their

teachers talked about future planning in their classes. Question 15 asked students about their perceptions of the beliefs of the adults in their school had about students' ability to succeed. The majority of students (67 or 81%) believed the adults in their school thought students could be successful and answered in the two highest levels of the truthful scale. Students at both schools responded similarly. Table 24 displays the student responses by school.

Table 24: Q15 School Believes by School.

School	School Believes Students Here Can Succeed				
	Totally untrue	Mostly untrue	Somewhat true	Mostly true	Totally true
Mountain	3	0	6	7	24
Hilltop	1	2	4	10	28
Total	2	2	10	17	52

Question 16 asked students to indicate how frequently their teachers talked about college and planning in their classes. Thirty-eight students (45%) indicated their teachers frequently/often talked about college and planning for the future in their classes. Although six (7.1%) students responded conversely and answered in the lower two levels of the scale, only one student at Mountain reported rarely experiencing teacher talk about college in class compared to five students at Hilltop. Table 25 displays the student responses by school.

Table 25: Q16 Teachers Talk about College by School.

School	Teacher Talk about College				
	Never	Rarely	Sometimes	Often	Frequently
Mountain	1	8	13	12	6
Hilltop	5	4	16	12	8
Total	6	12	29	24	14

Question 31 asked students to indicate how many adults at school knew what they want to do in the future. Students selected responses from five categories: 0, 1, 2, 3, more than 3. Thirty-eight (45%) indicated three or more adults in their school knew what they want to do in the future. Of the 38 students who selected responses in those categories, twenty-five were Mountain students and 13 Hilltop students. Eighteen (21%) students indicated no one or “0” adults know what they want to do in the future. Of the 18 students who responded in this category, sixteen were from Hilltop and 2 from Mountain. More students from Mountain (62.5%) responded there were three or more adults at school who knew their future plans as compared to Hilltop where fewer students (28.8%) responded in those categories. A chi square test was performed to examine the relation between the number of adults at the school who knew the student’s future plans and the school a student attended. The relation between these variables was significant, $\chi^2(4,85) = 15.66$, $p = .004$. Students at Mountain were more likely to have three or more adults who knew their future plans than the students at Hilltop. Table 26 displays the frequency of adults who know students’ career plans by school.

Table 26: Number of Adults who know Future Plans by School.

	Number of Adults					
School	0	1	2	3	More than 3	Total
Mountain	2	8	5	10	15	40
Hilltop	16	7	9	5	8	45
Total	18	15	14	15	23	85

Teacher Feedback/advocacy

Questions 14, 17, 18, 19 and 20 comprise the presence of teacher feedback/advocacy measure. Questions 14 asked students to indicate their perceptions of their teachers' beliefs about their ability to succeed. The majority of students (78.8%) responded in the two highest levels of the scale. Students at both schools responded similarly to this question. Table 27 displays the student responses for each category by school.

Table 27: Teachers Believe by School.

School	Teachers Believe				
	Totally untrue	Mostly untrue	Somewhat untrue	Mostly true	Totally true
Mountain	2	1	4	14	19
Hilltop	3	0	8	10	24
Total	5	1	12	24	43

Question 17 asked students to indicate if their teachers talked to them one-on-one about college and career planning. The majority of students (n=60, 71%) responded their teachers did not talk to them one-on-one about college and career planning. On this question, more students at Hilltop responded in the lower two categories. Fifteen students from Hilltop responded that teachers never talk to them one-on-one about college and career planning compared to six at Mountain. Table 28 displays student responses by school.

Table 28: Teachers Talk one-on-one.

School	Teachers Talk One-on-one				
	Never	Rarely	Sometimes	Often	Frequently
Mountain	6	21	8	4	1
Hilltop	15	18	9	1	2
Total	21	39	17	5	3

Question 18 asked students if they thought their teachers believed they would graduate from high school. The majority of students (69 or 81.2%) believed their teachers thought they would graduate from high school. Students at both schools responded similarly. Table 29 displays the frequency of student responses by school across the response categories.

Table 29: Teachers believe will graduate.

School	Teachers Believe will graduate				
	Totally untrue	Mostly untrue	Somewhat true	Mostly true	Totally true
Mountain	1	2	7	6	24
Hilltop	1	1	4	16	23
Total	2	3	11	22	47

Question 19 asked students to indicate if their teachers told them one-on-one how their work in class would help them in the future. The majority of students (n=45, 53%) responded affirmatively that their teachers did tell them personally how their work in class would help them in the future. Students at both schools responded similarly. Table 30 displays student responses by school.

Table 30: Teachers tell me one-on-one.

School	Tell me one-on-one work in class helps for future				
	Totally untrue	Mostly untrue	Somewhat untrue	Mostly true	Totally true
Mountain	4	7	10	9	10
Hilltop	5	3	11	13	13
Total	9	10	21	22	23

Question 20 was open-ended and asked students to indicate which teachers talk about college and careers in their classes. Seventy-three (86%) students indicated a teacher's name (e.g., "Ms. B") or a general statement (e.g., "all of them"). Twelve (14%) students indicated none of their teachers talked about college and careers in their classes. The majority of students at both schools listed a teacher(s) for this question. Table 31 displays responses by school indicating if a student listed a teacher or group of teachers.

Table 31: Which Teachers talk about College and Careers.

School	Listed a teacher (s)	Did not list teacher (s)
Mountain	36	4
Hilltop	37	8
Total	73	12

The majority of students (67 or 78.8%) believed their teachers believed they could succeed and responded on the two high levels of the scale. Although the majority of students thought teachers believed in their ability to succeed, the majority of students (60 or 70.6%) did not perceive teachers talking one-on-one about planning for the future. However, the majority of students (45 or 53%) did believe that teachers talked to them one-on-one about how their work in class mattered for the future. This finding supported the teachers' comments during the interviews. Teachers at both schools reported telling students how their work in school mattered for their career and potential employment.

Guidance Counselor Feedback/Advocacy

Responses to questions 21 and 22 were combined to create the presence of guidance counselor

feedback/advocacy measure. Questions in this section asked students to indicate the extent to which their guidance counselor talks to them about college and career planning. These items were school specific in that each guidance counselor's name was included in the questions. The majority of Mountain students (37 or 93%) indicated their guidance counselor talks to them about college and career planning. However, the responses differed by school. Eight (18%) of the Hilltop students responded in the "totally true" and "mostly true" categories. Twenty (45%) of the Hilltop students also responded in the "totally untrue" and "mostly untrue" categories. Although there appears to be a difference in the median responses by school, the difference is not statistically significant. Table 32 displays the median scores on the five-point scale of each school for the presence of guidance counselor feedback/advocacy and beliefs scale.

Table 32: School Comparison of Median scores of Presence of guidance counselor feedback.

School	Q21 Guidance in Class	Q22 Guidance one-on-one
Mountain	5	5
Hilltop	3	1
Total	4	3

However, student responses on individual questions varied by school. More Hilltop students responded that their guidance counselor did not talk about college and career planning in their classes than Mountain students. Fifteen students (33%) at Hilltop responded in the lower two categories as compared to only one Mountain student (3%). Thirty-five Mountain students (88%) responded in the most affirmative category as compared to five Hilltop students (11%). Table 33 displays student responses by school.

Table 33: Guidance in Class.

School	Guidance in Class				
	Totally untrue	Mostly untrue	Somewhat untrue	Mostly true	Totally true
Mountain	1	0	1	3	35
Hilltop	9	6	13	12	5
Total	10	6	14	15	40

Hilltop students responded very differently than Mountain students on question 22, which asked students if their guidance counselor talked to them one-on-one about their college and career plans. Twenty-five Hilltop students (56%) responded that their guidance did not talk to them one-on-one about their college and career plans. No Mountain student selected that response. However, twenty-three Mountain students (57%) responded that converse. Since there were four cells with less than 5 responses, a chi square could not be used. A Fisher Exact Test was used instead. The value for the test statistic was 54.055 at $p < .0001$. Table 34 displays student response by category and by school.

Table 34: Guidance one-on-one.

School	Guidance one-on-one				
	Totally untrue	Mostly untrue	Somewhat untrue	Mostly true	Totally true
Mountain	0	1	5	11	23
Hilltop	25	4	8	6	2
Total	25	5	13	17	25

College Planning Activities

Responses to items 12 and 23 were combined to create the presence of college planning activities measure. Questions in this section asked students to indicate the extent to which they were

taking steps now towards their careers and if they perceived opportunities to gather information about college and careers. Students responded positively to presence of college planning activities at their school with a median score of 4 on a five-point scale where 5 is “totally true”. Students at both schools responded similarly to the individual questions regarding their perceptions of college planning activities. Table 35 displays the median scores by question and school for the college planning activities measure.

Table 35: Median Scores for Perceptions of College Planning Activities by School.

School	Q12 taking steps for career	Q23 opportunities to learn re: college	College Planning Activities (Q12 + Q23)
Mountain	4	4	4
Hilltop	4	4	4
Total	4	4	4

Research Question Two Summary

The majority of students who completed the MSCCAS perceived the presence of all four supports in their school environment. However, some variations in the perceptions of particular aspects of a support and some differences in perceptions between schools were found. There did not appear to be any significant difference in students’ perceptions of the supports by academic achievement, parental education, or parental marital status.

Students at both schools appeared to perceive the presence of college talk in their schools with the exception of one measure: the number of adults at school who knew their future plans. On this measure, Hilltop students reported fewer adults knowing their future plans. In general, students from both schools perceived the messages they received at school to be supportive of

their college and career aspirations. Students also perceived the presence of teacher feedback/advocacy with respect to teachers' beliefs in their potential for success and students' perceptions of teacher connecting their class work to the future. However, students did not perceive teachers talking to them one-on-one about their future plans.

Perhaps one of the main differences in the responses by school to questions in this portion of the survey was on the responses to the perceptions of the presence of the guidance counselor feedback/advocacy measures. Responses varied by school on individual questions but not on questions that were combined to comprise the measure. Students at Mountain perceived higher levels of guidance counselor feedback than Hilltop students. However, student perceptions did not differ by academic achievement, parental education, or parental marital status. Students also perceived supports for college planning in their school.

4.2.5 Results for Research Question Three

Findings for research question three—*which college and career aspiration supports identified in the literature and by school administrators and staff are perceived by seventh grade students to be useful in their schools?*—are categorized by support and include the related MSCCAS items. The survey items are based on four college and career supports. They are (1) college talk, (2) teacher feedback/advocacy, (3) counselor feedback/advocacy, and (4) college planning activities. Survey questions had four different response options with five gradations in the scale. Some questions asked students to indicate the degree of truth with the statement. Options were 1=totally untrue, 2=mostly untrue, 3=somewhat true, 4=mostly true and 5= totally true. Questions that asked students how much time they experienced a particular support had response options of 1=never, 2=rarely, 3=sometimes, 4=often, and 5=frequently. Multiple-choice

questions asked students to make a selection from a set of choices. Finally, open-ended questions allowed students to write in their own response.

College Talk

Questions 11 and 13 comprise the utility of college talk measure. Question 11 asked students to indicate the main way they learned about the career they chose in a previous question. The most frequent answer was “other” with 25 (29%) of the students writing in an answer that was not on the possible response list. Of the responses in the other category, six (24%) students indicated an experience with the field was the main way they learned about the career. Additional responses included in the “other” category were related to enjoying aspects of the career (e.g., “the love of animals”). Twenty (24%) students indicated that television was the main way they learned about their career aspiration and six (7%) indicated it was through the internet. Fewer students (11 or 13%) indicated parents/grandparents and teachers at their school (eight or 9%) as the ways in which they learned about their careers.

Sixty-one (72%) students who completed the MSCCAS indicated on Question 13 that they believed if they worked hard they could achieve their career plans. The responses to this question were very similar across schools. Table 36 displays student responses by school.

Table 36: School Comparison of Question 13.

School	Work hard in school, can achieve career plans				
	Totally untrue	Mostly untrue	Somewhat untrue	Mostly true	Totally true
Mountain	0	0	4	8	28
Hilltop	1	1	1	9	33
Total	1	1	5	17	61

Students experienced the utility of college talk in different ways. The sample of students in general believed that hard work in school will lead to their career aspirations.

Teacher Feedback/Advocacy

Questions 25, 26, 27 and 30 comprise the utility of teacher feedback/advocacy scale. Questions 25 and 30 asked students to indicate the extent to which statements about their teachers' knowledge of what is needed to be successful in the future and their future plans are most true. Question 27 was open-ended. Students were asked: "Which teacher or teachers do you talk to about your college and career plans?" Question 26 asked students to indicate if *they* talked to teachers about their college and career plans.

Responses to questions 25 and 30 were combined together to create one part of the utility of teacher feedback/advocacy scale. On this measure, students indicated they found the utility of teacher feedback/advocacy in their school to be somewhat true. Twenty-six (65%) Mountain students responded in the "totally true" and "mostly true" categories when asked about the utility of teacher feedback/advocacy. Seventeen (38%) Hilltop students responded in the same categories. Response options included: 1=totally untrue; 2= mostly untrue; 3=somewhat true; 4=mostly true; 5=totally true.

Median scores were computed for each individual question and for the utility measure. Although there is not a statistical difference by school in the utility measure, there is a statistical difference in the responses by school for question 30. A chi square test was performed to examine the relation between teachers who know the student's college and career plans and school. The relation between these variables was significant, $\chi^2(4,84) = 14.7$, $p = .005$. Students at Hilltop were less likely to believe that their teacher knew their plans for the future than the

Mountain students. Table 37 displays a comparison by school of responses to the utility of teacher feedback/advocacy item set by school.

Table 37: Median Responses of Utility of Teacher Feedback/adv. by School.

School	Q25 teacher know needed to be successful	Q30 teachers know college/career plans	Utility of Teacher Feedback/advocacy (Q25+ Q30)
Mountain	4	4	4
Hilltop	4	2	3
Total	4	3	4

Question 26 asked students to indicate the frequency they talk to their teachers about their college and career plans. Fifty-seven students (48%) indicated they “never” or “rarely” talked to their teachers about their college and career plans. Of the students who responded “never” or “rarely”, thirty-four were from Hilltop and 16 were from Mountain. A chi square test was performed to examine the relation between the frequency of student’s talking to their teachers about their college and career plans and the school they attend. The relation between these variables was significant, $\chi^2(4, 85) = 15.25, p = .004$. Students at Hilltop were less likely to talk to their teachers about their college and career plans than the students at Mountain. Table 38 displays the frequency of the responses by school.

Table 38: Frequency of Teacher Talk by School.

School	Frequency of Teacher Talk				
	Never	Rarely	Sometimes	Often	Frequently
Mountain	4	19	10	5	2
Hilltop	22	12	6	4	1
Total	26	31	16	9	3

Question 27 asked students to identify which teachers they talked to about their college and career plans. Twenty-five (29%) students indicated they do not talk to any teachers about their college and career plans. Of these 25 students, twenty-two were from Hilltop and three were from Mountain. A chi square test was performed to examine the relation between the student's listing a teacher they talk to about their college and career plans and the school they attend. The relation between these variables was extremely significant, $\chi^2(1, 85) = 17.47$, $p = .0001$. Students at Mountain students were more likely to list teachers they talked to about their college and career plans than Hilltop students. Table 39 displays the responses by school.

Table 39: Talk to teachers about plans.

School	Talk to teachers	Do not talk to teachers
Mountain	37	3
Hilltop	23	22
Total	60	25

Guidance Counselor Feedback/Advocacy

Responses to items 28 and 29 comprise the utility of guidance counselor feedback/advocacy scale. These questions were school specific in that the guidance counselor's names were included in the questions. Question 28 asked students to indicate the amount of time they talked to their guidance counselor about their college and career plans. Thirty-two (71%) Hilltop students responded that they "never" talk to their guidance counselor about their college and career plans. No Mountain student responded "never" to this question. Twenty-six (65%)

Mountain and four (9%) Hilltop students responded they “frequently/often” talk to their guidance counselor about their college and career plans. A chi square test was performed to examine the relation between the frequency of talk to the guidance counselor about their college and career plans and the school they attend. The relation between these variables was extremely significant, $\chi^2(4, 85) = 50.53, p = .0001$. Students at Hilltop were less likely to talk to their guidance counselor about their college and career plans. Table 40 displays the student responses by school.

Table 40: Frequency Talk to Guidance Counselor by School.

School	Frequency Talk to Guidance Counselor				
	Never	Rarely	Sometimes	Often	Frequently
Mountain	0	5	9	14	12
Hilltop	32	3	6	4	0
Total	32	8	15	18	12

Question 29 asked students to indicate if they believed their guidance counselor was knowledgeable about what was needed to be successful in the future. The majority of students believed their guidance counselors were knowledgeable. Although Hilltop students reported limited interaction with their guidance counselor, the majority of students indicated they perceived the counselor as knowledgeable. Table 41 displays student responses by school.

Table 41: Guidance counselor knows.

School	Guidance counselor knows				
	Totally untrue	Mostly untrue	Somewhat untrue	Mostly true	Totally true
Mountain	0	0	2	14	24
Hilltop	4	1	11	12	17
Total	4	1	13	26	41

College Planning Activities

Questions 24, 33 and 34 comprise the utility of college planning activities scale. On qualitative question 24 students were asked, “What does your school do that you find helpful to you as you think about your career plans?” Eight (9%) students wrote “career day,” seven Mountain students and one Hilltop student. Six (7%) students responded “nothing.” All six were Hilltop students. Nine Mountain students wrote responses related to an in class career planning activity conducted by their guidance counselor. The majority of the qualitative responses were related to overall educational preparation.

On questions 33 and 34 students were asked to indicate if there was someone at their school that really helps them prepare for the future and to list their name. The majority of students (n=64, 75%) reported yes and listed at least one person’s name. The responses were similar across schools. A chi square test was performed to examine the relation between the school a student attends and the category of person they listed. The relation between these variables was extremely significant, $\chi^2(4, 85) = 29.28, p = .0001$. Table 42 and Table 43 display student responses of does someone help the students plan for their future and categories of the person by school.

Table 42: Someone who helps.

School	No	Yes
Mountain	8	32
Hilltop	13	32
Total	21	64

Table 43. Categories of who helps.

School	Categories				
	Other	No one	Someone outside of school	Teacher	Guidance Counselor
Mountain	2	5	3	9	21
Hilltop	2	10	0	30	3
Total	4	15	3	39	24

Research Question Three Summary

Students perceived the utility of the supports in the schools differently across schools, academic ability, and family background. Guidance counselor feedback/advocacy and college planning activities varied the most by school. Student perceptions of the extent to which the guidance counselor was useful as they planned for their futures was much lower at Hilltop than at Mountain. Hilltop students perceived their teachers as most useful as they planned for the future.

4.2.6 Summary of Findings

Students perceived the presence and utility of college and career aspiration development supports in their schools. It is important to note there were differences in the ways in which students perceived these supports in play at their schools.

Students at Hilltop did not seem to experience guidance counselor feedback/advocacy in the same ways as students at Mountain. Although students at Hilltop believed their guidance counselor was knowledgeable, Hilltop students responded on the lower end of the scale for questions relating to their experience with their guidance counselor talking about college and career planning both one-on-one and in classes. Hilltop students also listed fewer people who

knew their future plans than the Mountain students.

Students at Mountain seemed to experience teacher feedback/advocacy in ways that differed from Hilltop students. Mountain students were more likely to talk to their teachers about their future plans than Hilltop students and list more people who knew their future plans.

Although there seemed to be some school-based differences, these differences did not appear to have very much effect on the aspirations of the students. Students at both schools had high aspirations for their futures. In addition, students believed the adults in their school were knowledgeable about what is necessary to be successful in the future, and more notably, students at both schools believed that their teachers and other adults at school believed they could be successful in the future and graduate from high school. Perhaps it may be necessary to look at a wider range of school support for college readiness to find big effects.

5.0 DISCUSSION

“Your aspirations are your possibilities.” --Samuel Johnson

5.1 INTRODUCTION

This study investigated urban seventh graders’ perceptions of the presence and utility of four school-based college and career aspiration development supports: college talk, teacher feedback/advocacy, guidance counselor feedback/advocacy and college planning activities. The major goal of this study was to better understand if students systematically notice the presence of the various supports in their lives at school. Furthermore, the study investigated the extent to which students’ judged the supports to be helpful as they thought about their futures. A secondary goal of the work was to gain some understanding of the variation in perceptions of presence and utility of the supports for identified subgroups of students. Implicit in the design of this study was the belief that these supports were important in shaping post-secondary aspirations.

Importantly, the study adopted a student-centered approach to gauging the impact of schools’ efforts to develop and support students’ aspirations. A key entailment of this student-centered approach was to query students about a “culture of aspiration support” comprised of features of schooling related to the four identified supports that have been promulgated in the

research literature as important for aspiration development. This study did not “objectively” determine the presence of a support simply because the school indicated it was there. Instead, this study used a student-centered methodology that required students to recognize the presence of the support in practice, as if naturally occurring in their lives.

As such, this approach differentiates this study from the vast majority of work on aspirations that typically employed some version of an input-output analytic approach. In these designs, researchers work to investigate whether the presence of a support is associated with the level or kind of aspiration a student reports. For example, in that tradition, researchers would measure college talk or increase the amount of college talk a student was exposed to and measure the aspirations of the student. Such a study uses school reporting or experimenter assessment of inputs and assesses outcomes through student surveys or interviews.

In contrast, this study, designed in large part to impact practice, measures student perceptions of the inputs as well as student-reported outcomes. It focuses on students’ perceptions of potentially interacting supports in all their variety in schools. The study offers important feedback to schools on the likely impact of their programmatic efforts to support aspiration development and support. Simply put, if schools spend programmatic energy on designs intended to support aspirations, it is important that students perceive those energies in ways that are likely to support aspiration development.

A major assumption of the current study is that presence of formal programs *per se* may have little impact on aspirations if students’ do not perceive the presence of the supports or gauge the supports to be useful. This assumption is based on a social-cognitive theoretical view of development and learning. Social-cognitive theories, including social-cognitive career theory (Lent, Brown, & Hackett, 1994) stress the importance of individuals’ beliefs in predicting future

behaviors and cognitions. Students' perceptions of their environments, including whether they perceive a support to be present and useful in their environment, may be more predictive of future action than any objectively derived indicator of, for example, the quality of college talk in a school. Simply put, what matters most, according to this theory, would be the subjective processing and interpretation of school experiences, not the experiences themselves. Exploring student perceptions of the school-based college and career supports is important to the study of aspirations because the extent to which the supports affect aspirations depends on how students make meaning of the experiences and how they relate that meaning to their future.

Key Findings

The results from this study provide some evidence that the majority of students at the two schools perceive each of the supports to be both present and useful in their lives at school. The survey results indicate that for each support (in regards to both its presence and its utility), most students responded "mostly true" or "totally true" or "frequently" or "often" to many of the questions. There were two exceptions. The first exception was guidance counselor feedback/advocacy, where some students indicated interactions with the guidance counselor occurred infrequently and were not particularly useful. The second exception was whether students perceived teachers talking to them one-on-one about their future plans.

While the patterns just described were true for each support, there were a few questions where the student responses appear inconsistent with this general conclusion. Though the effects for both schools were clearly present, there was variation in how strong the effects were on particular questions for one of the schools. There were differences in the number of adults who

knew their future plans, presence of guidance counselor feedback/advocacy, and three questions of teacher feedback/advocacy.

To better gauge how robust these findings might be, I investigated whether these perceptions of presence and utility of the supports varied by subgroups of students. These groups included students who self-reported relatively higher and relatively lower grades on their last report card and students whose primary caregiver had relatively higher levels of formal education; and students who self-report living with two parents or not. These variables are meant to serve as indicators of socio-economic status and prior achievement. Though self-report indicators are only proxies for socio-economic status and achievement, these indicators have been used in other studies when data is anonymized and when more complete information about eligibility for free or reduced lunch or prior performance is unavailable.

It may be an important finding that students, across subgroups, perceived the school relatively uniformly. The difference in school outcomes for subgroups of students is well documented. Less well understood is how subgroups of students perceive the school. In this study, the results suggest that students may perceive the supports at these schools in a similar fashion. There are a number of possibilities that these results raise. It is possible that the results are not true, that measurement error or error in the classification of the subgroups by these proxies is impacting the findings. Another possibility may be that students are more similar to each other in other important ways such as parental support and/or involvement in education. If, however, it is the case that students are perceiving these schools similarly across the achievement or socio-economic spectrum, this might mean that this school is actualizing in practice some of what it claims to be prioritizing. Namely, this school wants to support all students in meaningful ways. It is an ideal of schooling that teachers and schools work to support the development of all

students, regardless of whether they are struggling academically or in other ways. There is some evidence from this study that this school system may be reaching that goal.

5.2 SEVENTH GRADERS HAVE ASPIRATIONS FOR THEIR FUTURES

The seventh graders at Mountain and Hilltop schools think about their futures. All students who completed the MSCCAS were able to list at least one possible career choice and write one or more sentences describing why they might like this career. Almost all of the students (89%) indicated they aspired to earn at least a college degree. Belief that the activities of a career would be enjoyable was the most frequent reason why they thought they would like the career. The students in this sample had longstanding career interests and were able to convey ideas about what the career might entail. Similar to the results of other studies, this work confirmed and deepened our understanding that students as early as middle school have career aspirations and perceptions about occupations (Atanda, 1999; Borders & Gibbons, 2010; Gottfredson, 2005; Hossler et al., 1999; Tang et al., 2008).

Several teachers remarked during the interviews that they felt college need not be the only option for students and that they focused on preparing for careers. Interestingly, very few students in this sample listed technical or trade school as one of their career options. Perhaps students did not have a clear understanding of what the phrase “technical/trade school” meant. Did students think “any” postsecondary education was “college”? Another possibility may be that students did not have exposure to the employment opportunities available to graduates of these types of degrees. Future research might investigate the role of non-university based postsecondary education and career aspirations.

5.3 COLLEGE TALK IS IN THE AIR

The majority of students described their school environment as supportive of their college and career aspirations. Most students believed their schools were places where teachers and other school personnel believed in their ability and the ability of their peers to graduate from high school and succeed in the future. This is an important finding given that research has shown that students who believe they are receiving adequate preparation for the future are more likely to have higher aspirations (Atanda, 1999; Borders & Gibbons, 2010; Gottfredson, 2005; Hossler et al., 1999; Tang et al., 2008).

Interestingly, although students indicated their teachers sometimes talked about college, careers, and plans for the future in general, students did not list school resources as the main ways they learned about careers. This finding may be somewhat surprising given the assumption of some that students who are low-income and traditionally considered underserved may be more reliant on school for sources of information about college and future careers. The results of this study indicate the problem is more complex than that. These students, presumably like their more affluent peers, have multiple sources of information about the future. Ready access to the Internet and other forms of media like television may allow students who are traditionally considered underserved to gain knowledge and explore careers that may have been financially prohibitive in the past. Schools might need to better account for this coordination process and better support integrating information from multiple sources, in and out of school settings.

For this sample, the majority of students indicated their caregiver had completed some postsecondary education. Given that students have access to family members with postsecondary experience, I suspect that more students are receiving messages about college and careers from outside of school than might be expected based on assumptions about the sample from

demographic indicators alone, such as socio-economic or minority status. This may help account for why so few students selected school-based resources as the main ways they learned about their career choice. Again, this highlights the need to take a complex view of in and out of school coordination of influences on aspiration development. Perhaps for this group of students, signals from home and school that success is possible and that one is expected to succeed may, be at least as important than specific coaching about careers and what is needed to attain them.

5.4 TEACHER FEEDBACK/ADVOCACY

Students at both schools indicated they rarely talked to their teachers about their college and career plans one-on-one. This is an unexpected and potentially puzzling finding given the emphasis both schools place on student-teacher relationships and interactions. Research has found teacher talk about college and careers to be most powerful when students feel their teachers have a personal interest/connection with them (Pitre, 2006). Perhaps teachers having a personal interest and connection in general is more important than whether the connection is a source of specific information.

Although the majority of all students indicated they do not regularly talk to their teachers about their career plans, some students responded differently to an open-ended question that asked them to name the teacher(s) they talk to about their college and career plans. The majority of Mountain students listed the guidance counselor in the response to this question; very few listed the name of a seventh grade teacher. Perhaps students interpreted the word “teacher” to include adults they see in the school and thus listed the guidance counselor.

Hilltop students' responses were more consistent with the previous findings. On the open-ended question, close to half of the students wrote "no one" or "none". Interestingly, 22% of the students listed teachers from a prior grade, with many students listing the same former teacher. Students wrote: "I talked to Ms. J. when I was in 6th grade" and "I used to talk to Mr. G. but I don't talk to anyone anymore".

The concept of perseverance and commitment is one of the key messages Sunrise weaves throughout instruction and culture in their schools. Several teachers said in the interviews that they believed students needed to know that hard work was necessary to be successful. Students responded positively when asked if they believed that hard work could help them achieve their goals. This may mean that the teachers are conveying this message and that these messages of perseverance and commitment may already have some traction with students.

5.5 THE POWER OF THE GUIDANCE COUNSELOR

Of all the findings that showed differences between the two schools, none was more pronounced than students' perceptions of guidance counselor support. Students at Mountain school saw their guidance counselor as important to their college and career aspiration development. In fact, on the open-ended questions, the majority of students listed the guidance counselor as the person who talks about college and careers in their classes, the person they talk to about their careers, and the person who is most helpful as they prepare for their futures.

The Mountain guidance counselor only worked with middle school students, which was explained during the interviews as a deliberate decision by the school leaders to devote resources to students in the middle grades. I suspect this arrangement may have allowed the Mountain

guidance counselor to devote more time to working with students on college and career planning. The Mountain guidance counselor informally met with seventh grade students individually and believed this individual work with students was the most beneficial to them. Many students listed the guidance counselor as the person with whom they talked about college and careers the most and the person who was most helpful as they thought about their futures. It appears that Mountain students noticed and found these interactions helpful. At Mountain, the guidance counselor serves a critical role in the overall development of students' aspirations. This finding is consistent with the research literature (Trusty, 2000), which stresses the importance of the frequency and quality of the guidance counselor supports and interactions. Consistent, positive, and frequent direct interactions positively affect students' educational aspirations (Hossler et al., 1999).

Over a third of Hilltop students indicated no adult at school knows what they want to do in the future. Given the positive school environment that students said they experience and that I observed while conducting this study, I did not expect to find so many students who felt this way. Conversely, all but two students at Mountain indicated at least one adult at school knew their career plans. I suspect the differences in the Mountain student responses may be due to the involvement of their guidance counselor. Since the overall levels of aspirations did not differ between schools, this may suggest that some levels of aspirations can be generated even without specific college preparatory inputs. However, acting on those aspirations may require specific guidance.

5.6 LIMITATIONS OF THE STUDY

There are several limitations to this study. One limit is the exploratory nature of the survey. Since survey items were integrated from several other instruments, some issues arose with respect to the clarity of the questions and students' conceptualizations of each question's referent. For example, although most students indicated their teachers did not talk to them one-on-one about their college and career plans, most students responded positively that teachers tell them one-on-one how their work in class will help them in the future. This may be a problem with the instrument in that students may not have interpreted "future" as college or career plans. Mountain students also listed the guidance counselor as a "teacher" when asked to identify teachers with whom they talk about their college and career plans.

Secondly, the majority of students in this study had caregivers with some postsecondary education. Perhaps the high numbers of educated families is related to enrollment in a charter school. To enroll in a Sunrise charter school, families must complete several steps including meeting with school personnel. The additional steps may make it more difficult for families without postsecondary educational skills to enroll their students in a charter system like Sunrise. I suspect this aspect of the sample to be fairly unique to this study. This raises the possibility once again that knowing one's parents/caregivers succeeded at least in finishing high school and being in an environment where teachers believe every student can learn may be more important, in some ways, than receiving more specific information on how to prepare for college and a career. Follow-up work may include studies of middle class students, students with parents who have finished high school in schools where teachers believe every child can succeed and students with less home support in schools where teachers do not believe in their ability to succeed.

5.7 FUTURE RESEARCH

This work was only an initial step to understand students' perceptions of the supports in their lives at school. Including information about perceptions of utility was meant to get some sense of the quality of the supports, at least through the eyes of students. However, much more work is needed to understand how the supports might productively be instantiated in schools to increase the likelihood that students develop aspirations and that they ultimately pursue those aspirations. We do not know, for example, which features of college talk are important, when, by whom, and in which context? Perhaps having structured conversations in multiple content classrooms most impacts aspirations.

Future research might include measuring the ways in which college and career aspiration development supports work together to shape how students perceive and use school-based supports. Understanding whether student perceptions of personal interactions with school staff on issues related to college and career match staff perceptions may also be another line of research. More qualitative studies of students' experiences in schools is necessary to better understand the qualitative differences in perceptions that might most predict aspiration development.

In addition, this study investigated student perceptions of their supports and aspirations at one point in time. It is unclear from this work if the students will be able to sustain their aspirations as they continue through schooling. Future research might include longitudinal studies of students' perceptions of school-based supports and aspirations to determine if particular school-based supports are more salient over time.

5.8 IMPLICATIONS FOR PRACTICE AND POLICY

The results from this study have several important implications for practice. Schools should attend to the college and career aspirations supports of seventh graders. As this study shows, students are thinking about their futures and, at least implicitly, may be making decisions about their futures. Students were able to list what they wanted to be and why they thought this career might be a good fit. Schools might better support aspiration development by working to make college and career talk both more pervasive and meaningful to students. It remains unclear how to make college and career talk more meaningful at this point. This is an important problem of practice that the research community and schools need to address more directly. A college and career development curriculum might make the messages students hear about their future planning more consistent and coherent. The types and frequency of these messages can be structured ways that school can help students “try on” different careers and options, allowing students to consider more options for their futures.

Teachers might benefit from professional development opportunities that focus on more explicit support for aspiration development. The discussion needs to be raised in schools: what are our hopes for our students? What are our roles in their longer-term development? The qualitative work done in this study sparked a conversation at both schools about supports for aspirations. This may be an indicator that schools need a push to address these questions more directly.

Middle school is a critical time in the development of the college and career aspirations for adolescents. Research has found that during middle school, the school environment can be an important influence on student aspirations. Seventh grade is particularly important for college and career aspiration development in that students are just beginning to think about their futures

and students have not yet made critical decisions about high school courses (Adelman & Gonzalez, 2006; McDonough, 1997; Plank & Jordan, 2001). Given this opportunity to positively influence the career trajectories of seventh graders, what can middle schools do to better support the college and career aspirations of their students? Middle school guidance counselors can provide specific college and career information to students. School leaders can provide teachers with professional development for college and career planning. Teachers can find ways to embed career preparatory information into their lessons. Finally, school districts need to allocate resources for college and career planning programs.

Increasing the academic achievement of K-12 students has been and continues to be an important political issue that has garnered much nationally attention. Federal legislation such as the No Child Left Behind Act (2001) and funding opportunities from both the private sector (e.g., the Gates Foundation) and the public sector (Race to the Top) have focused the nation's attention on the need to make all public schools accountable for the academic success of all students (Holland and Farmer-Hinton, 2009; Jackson et al., 2011). However, increasing academic achievement alone, without attending to the development and sustainability of college and career aspirations of adolescents, is a myopic view of school reform. Academic success without a connection to future plans and goals may simply not be enough to impact the life trajectories of students, particularly those students who are the most underserved in public schools. Or, alternatively, if students do not have aspirations for the future, maybe they will be unmotivated to work to increase their academic achievement.

5.9 CLOSING THOUGHTS

This study raises the possibility that students' college and career aspirations may be informed by the overall ethos of the school and by their overall relationship with adults in such a way that the aspiration research field has not directly addressed. One way to interpret the results of this study is that students perceive a culture of college going even though they do not talk one-on-one with teachers. This may suggest we need to think more broadly about school-based college and career supports and in turn, the resources we allocate to support college and career aspirations.

APPENDIX A: INTERVIEW PROTOCOL

Middle School Aspirations Project Administrators Survey

Name: _____ School: _____

Date: _____

1.	Does the school have a formal college and career development (CCD) curriculum?	YES	NO	Not Sure
2.	If yes, how was the CCD curriculum designed?			
3.	Please describe the CCD curriculum and implementation including professional development for school staff.			
4.	How is the CCD curriculum assessed?			
5.	What, if any, elements of the CCD program are unique to your school?			

6.	Which of the components of the CCD program do you think are most useful to the 7 th graders in your school? Why?
7.	In your opinion, what are the key components of a CCD program for middle school students?

APPENDIX B: SEMI-STRUCTURED INTERVIEW CODING PLAN

Support	Key Themes
College Talk	Talk about college and careers in class Connect college and careers to lessons Job and content links
Teacher Feedback/advocacy	One-on-one career focus talk, guidance in goal setting, planning and encouragement
Guidance Counselor Feedback/advocacy	One-on-one career planning, career interest survey, degree options, college majors
College Preparation Activities	Career Day, Interviewing professionals, campus visits, university students in school, course selection planning, field trips, college requirements

**APPENDIX C: SURVEY INTRODUCTION SCRIPT FOR MIDDLE SCHOOL COLLEGE AND
CAREER ASPIRATIONS SURVEY**

Good afternoon/Good morning. My name is Linda Berardi-Demo and I work at the University of Pittsburgh School of Education. I am working with XXX Schools to better understand your experience here. We are trying to understand how you are thinking about your future.

I have a short survey for you to complete. This is not for a grade. You will not put your name on it either. Please answer the questions as truthfully as you can. Also, please answer every question. The computer will not let you submit the survey without answering all the questions.

I am going to stay in the room while you take the survey. If you have any questions, please raise your hand.

APPENDIX D: MIDDLE SCHOOL COLLEGE AND CAREER ASPIRATIONS SURVEY

This survey is not a test and will not count for a grade. These questions ask about some of your experiences in school. Please tell us how you really feel. We want to know more about how you think about your future.

* Required

1. Are you male or female? *

- ☐ Male
- ☐ Female

2. Who are the adults you live with most of the time? *

- ☐ My mom and dad
- ☐ My mom only
- ☐ My dad only
- ☐ My mom and stepfather
- ☐ My stepmother and dad
- ☐ My grandmother/grandfather only
- ☐ My grandmother and my mom
- ☐ Other:

3. Think about the adult who you live with most of the time who went to school for the most number of years. This person: *

- ☐ Did not finish high school
- ☐ Finished high school
- ☐ Attended some college or earned a 2-year degree
- ☐ Finished a 4-year degree

- ☐ Finished a professional or graduate degree after college (examples: law school. medical school. school principal)

4. On my last report card I got *

- ☐ Mostly A's
- ☐ Mostly B's
- ☐ Mostly C's
- ☐ Mostly D's
- ☐ Mostly F's

5. What is the highest level of education you think you will complete? *

- ☐ some high school
- ☐ high school degree
- ☐ some college
- ☐ college degree
- ☐ some technical or trade school
- ☐ technical or trade school degree
- ☐ medical school
- ☐ law school
- ☐ Other:

My Career Plans

Please tell us about what you want to do later in life after you finish all your schooling.

6. After completing my education, I would like to have a career as a: *

7. I think I would like this career because *

8. How long have you been interested in this career? *

- ☐ Since I was in elementary school
- ☐ Recently (this year)
- ☐ For a few years
- ☐ For as long as I can remember

9. Please write down three steps you can take to prepare yourself for this career while you are in school. *

10. Think about the career you identified in Question 6. What is the highest level of education you think you will need to be successful in that career? *

- ☐ high school
- ☐ community college
- ☐ college/university
- ☐ technical or trade school
- ☐ graduate school
- ☐ law school
- ☐ medical school

- ☐ Other:

11. What is the main way you learned about that career? *

- ☐ my parents/grandparents
- ☐ sister or brother
- ☐ other family members (like an aunt or uncle)
- ☐ guidance counselor at Sunrise
- ☐ teacher at Sunrise
- ☐ classes at Sunrise
- ☐ television
- ☐ internet
- ☐ friend
- ☐ book
- ☐ Other:

My School Experience

In this section, please tell us about your experiences in school. There are no right or wrong answers.

12. I am taking important steps now to work towards my career goals. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue
- ☐ totally untrue

13. If I work hard in school, I can achieve my career plans. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue

- ☐ totally untrue

14. My teachers believe I can succeed in what I want to do. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue
- ☐ totally untrue

15. The adults in my school believe that students here can be successful. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue
- ☐ totally untrue

16. In my classes, my teachers talk about college and planning for the future. *

- ☐ frequently
- ☐ often
- ☐ sometimes
- ☐ rarely
- ☐ never

17. My teachers talk to me one-on-one about college and planning for the future. *

- ☐ frequently
- ☐ often
- ☐ sometimes
- ☐ rarely
- ☐ never

18. I believe my teachers think I will graduate from high school. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue
- ☐ totally untrue

19. My teachers tell me one-on-one how my work in class will help me in the future. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue
- ☐ totally untrue

20. Which teachers talk about college and careers in their classes? *

21 Mr. X, the guidance counselor, talks about college and career planning in our classes. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue
- ☐ totally untrue

22. Mr. X, talks to me one-on-one about college and career planning. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue
- ☐ totally untrue

23. There are many opportunities at my school to find out about college and careers. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue
- ☐ totally untrue

24. What does your school do that you find helpful to you as you think about your career plans?

*

25. My teachers know a lot about what you need to do to be successful in the future. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue
- ☐ totally untrue

26. I talk to my teachers about my college and career plans. *

- ☐ frequently
- ☐ often
- ☐ sometimes
- ☐ rarely
- ☐ never

27. Which teacher or teachers do you talk to about your college and career plans? *

28. I talk to Mr. X about my career plans. *

- ☐ frequently
- ☐ often
- ☐ sometimes
- ☐ rarely
- ☐ never

29. Mr. X knows a lot about what you need to do to be successful in the future. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue
- ☐ totally untrue

30. My teachers know what I want to do in the future. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue
- ☐ totally untrue

31. How many adults in this school know what you want to do in the future? *

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ more than 3

32. School is a waste of time. *

- ☐ totally true
- ☐ mostly true
- ☐ somewhat true
- ☐ mostly untrue
- ☐ totally untrue

33a. Is there someone at school who really helps you prepare for the future? *

- ☐ yes
- ☐ no

34b. What is that person's name? *

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